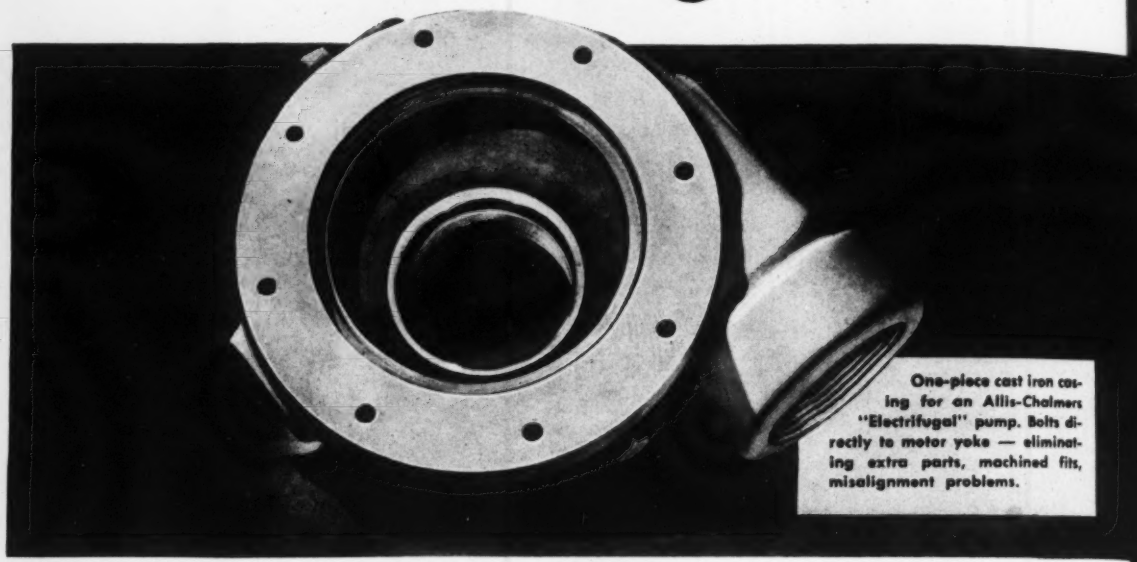
ENGINEERING NEWS-RECORD

ountable war houses are floated 577 mi. down Ohio for reuse at Camp Breckenridge.

[PUMP TIPS FROM ALLIS-CHALMERS—ONE IN A SERIES]

How to make CASINGS Last Longer . . .



One-piece cast iron casing for an Allis-Chalmers "Electrifugal" pump. Bolts directly to motor yoke — eliminating extra parts, machined fits, misalignment problems.

ABRASION AND CHEMICAL REACTION are the major causes of casing wear. For if liquid is gritty, or contains foreign matter; or casing is not constructed of the right materials for the pumping service required — casing life is materially shortened. A minor cause of direct casing wear is misalignment.

Original engineering of a pump can help prevent this wear. For example, Allis-Chalmers "Electrifugal" pump minimizes trouble from these sources in two ways: 1 — casings can be supplied in iron, bronze, stainless steel or other materials — depending upon type of service. 2 — It is a *unit-design* pump. Both impeller and motor are mounted on *one* shaft and in *one* frame. This means fewer parts, fewer fits — no chance for misalignment.

However, regardless of pump design, scheduled maintenance is still necessary if you expect to get longest wear from your casings. Some ways to do it . . .

▶ Check all piping supports regularly to see that they effectively supporting the load.

▶ Every 6 months check piping itself to see whether it h shifted in any manner. Disconnect suction and discha piping to see if it springs in any direction. Check the ali ment of pump and motor — shimming up units as require

▶ Once a year clean and inspect casing for wear, depos or pitting. Make necessary repairs.

▶ If foreign matter is being sucked into pump, wearing c ing unduly, provide the intake end of suction piping w a suitable screen.

▶ Send for your *free* copy of "Handbook for Wartime C of Centrifugal Pumps". This valuable booklet applies to *makes* of pumps; contains *no* advertising. ALLIS-CHALME MFG. CO., MILWAUKEE 1, WIS. A

ALLIS-CHALMERS PUMPS

Allis-Chalmers builds all types and variations of pumps shown at right. Capacities from 10 to 150,000 gpm—heads to 2500 lbs.

Engineering Library

The Week In Engineering and Construction

GINEERING NEWS-RECORD • OCTOBER 26, 1944 • VOLUME 133 • NUMBER 17

Equipment needs stabilized by changing war pattern

Narrowing of European war activities to German and Italian fronts checks flow of construction equipment across the Atlantic. Shipments to Pacific increase

hile military requirements for con- ion equipment probably will con- at current rates, as noted in *ENR*. 12, vol. p. 447, the equipment sit- is rapidly becoming stabilized. mbination of peak production of nits, rehabilitation and redistribu- f used items returned from inac- war theaters and from domestic ry construction projects, and re- ion of parts permit relaxing many ctions and controls for non-military es. However, heavy tractors, er and truck cranes and shovels Army Engineer special units are n the critical list.

Flow to Europe checked

arrowing of European war activities e German and Italian fronts has ked the ever-increasing flow of con- tion equipment across the Atlantic h prevailed for nearly three years. lessening demands in Europe are offset by the stepping up of ship- s to the Pacific areas. Some easing f the military requirements for truction machinery is indicated. ver, by the decision of Army En- rs last week to limit repair of equipment they have on hand in country, and still coming in from ka, the North Atlantic, Central rica, the Caribbean and North a to a few late models of certain al items for shipment to active s.

sides special Engineer war equip- these items include two models ir compressors, all crawler and cranes from ½ to 2½ yd., one of earth auger, one model motor r, a few types of pumps, three of road rollers from 5 to 10 tons, notorized scraper, semi-trailers, six ls of heavy tractors, and two types actor cranes and welders. All are fied as 1940 or later models, and ill be rebuilt to excellent condition.

Parts for rehabilitating these units are largely coming from surplus stocks being returned from inactive fronts, easing the demand for new production of parts. Echelon sets of repair parts that accompany all equipment shipped out of the country are now partly supplied from the same source. All Army equipment now undergoing repair in both Army and private shops will be completed, except where such completion is of doubtful economy. Also, repair of certain units having substantial civilian value and equipment required for domestic Army construction will continue. All other items which are determined to be surplus to the Army will be left in their present condition without repair. This will be left up to the buyer or the agency acquiring these items.

New production $800 millions

Production of new construction equipment and parts in 1944 will reach a value of $800 million, a 10 percent increase over the previous peak year of 1943, and more than six times the output in 1935, considered as a normal year. Shipments of parts will exceed $300 million. Heavy tractors have shown a substantial increase this year, with an estimated production of over 37,000 units as compared with 25,000 last year. Bulldozers jumped nearly 50 percent to more than 22,000 units, while tractor cranes and shovels will register a bigger rate of increase with 8,600 units, nearly double the 1943 output. Production of crawler wagons, crawler and truck shovels and cranes, pumps and concrete mixers also all showed gains this year.

In view of this increased production and the stabilization of the construction

(*Continued on page* 14)

Local governments may be asked to help match federal road funds

It is probable that several of the states which share considerable amounts of highway-user tax receipts with local units will require such local governments to furnish at least part of the amount needed to match any federal highway funds that may become available. This probability was forecast by the Public Roads Administration in a statement presented to Congress at the request of Senator Carl Hayden of Arizona, in connection with the $1,350,000,000 highway bill recently passed by the Senate.

Since at present there is no such provision, "Any matching to be done", the statement says, "will be either by the election of local officials or by compulsion (possibly under new legislation)."

The PRA estimates that the allocation of state highway-user revenues to subdivisions of the states during the next three years will amount to about one-fourth of the total receipts from road users. Estimates also indicate that $297,211,000 of the predictable total of $1,157,809,000 in 1945 will be allocated for local roads and streets; in 1946, $319,845,000 of a $1,270,847,000 total; and in 1947, $355,269,000 out of a total of $1,448,648,000.

The PRA statement indicates that in some states the local units of government have considerable freedom in expending the funds allotted to them for local roads and streets, while in others the expenditure has to be approved by the state.

Road-user revenues allotted to local roads amount to three times as much as those expended for non-highway purposes, while the total of these two funds is equal to about half the receipts which go to the state highway departments. The state departments for the three years will have a predictible income of $762,366,000 in 1945; $845,541,000 in 1946; and $973,043 in 1947.

As examples of how the diverted road-

(*Continued on page* 12)

Construction on this bridge awaits WPB approval

The New Jersey State Highway Department is ready to begin construction of the piers for a new lift span on Route 25-A, to cross the Passaic River at Newark, as soon as the War Production Board authorizes release of the necessary materials.

The improvement is designed to eliminate congestion at the heavily travelled intersections in Newark, East Newark and Harrison. The project involves grade separations at High St., Broad St. and Route 21 in Newark and Passaic Ave. in East Newark, together with necessary ramp connections to local streets. The new bridge will replace the existing Bridge Street crossing of the Passaic River, which is no longer adequate.

The vertical-lift span will measure 222 ft. between centers of bearings and provide a 200-ft. horizontal clearance between fenders. The vertical clearance will be 35 ft. above mean high water in the closed position and 135 ft. in the open position. The roadway will consist of two widths of 36 ft. each, separated by a 4-ft. dividing strip, and there will be two 6-ft. sidewalks.

C. F. Bedwell is acting chief engineer for the state highway department and Morris Goodkind is bridge engineer. The firm of Waddell & Hardesty, New York, have been retained for the design of the superstructure.

Oregon ready to go on big road program

Indicative of the extensive highway construction programs Western states are considering for the early postwar period was the recent announcement of State Engineer R. H. Baldock of Oregon that, subject to the availability of federal aid, his state is prepared to start $56,000,000 in road projects during the first two years of peace.

Mr. Baldock said his department is prepared to launch $16,000,000 of highway construction in the first seven months following the cessation of hostilities, and that contracts for another $10,000,000 worth of work could be let during the subsequent 10 months. Plans for the second postwar year call for the expenditure of an additional $30,000,000 said Mr. Baldock.

Redevelopment plan for downtown Brookly

On Oct. 12 a $50,000,000 plan fo redevelopment of an extensive ward area near Borough Hall, B lyn, New York City, was propose the City Planning Commission Comptroller Joseph D. McGoldrick

The suggestion is that the city up by condemnation proceeding acres of the worst-blighted portio the area, and, after rezoning and ing the necessary street and g changes, resell the real estate at tion to private builders.

In the whole 730-acre area inv the commission would alter exi street lines so as to merge 36 blocks 15 "super blocks", and thus pr an adequate and appropriate setti at least a dozen new public build in a civic center based on Borough

Mr. McGoldrick declared that proposed improvements would brin city a substantial enhancement in able values in that section, and the work could be financed by a 000,000 investment on the part of city. He believes also that the op tion would be self-liquidating upon eventual resale of the land.

. . .

Plan considered for Tex.-Calif. gas pipeli

Plans to construct a 1,000-mile, 000,000 natural gas pipeline Texas to southern California rec were revealed to be under consi tion by the Pacific Gas and Ele Co. of San Francisco and by sub aries of Pacific Lighting Corp. of Angeles.

First indication that the project under consideration came in a re tration statement filed by the P. G. E. with the Securities and Exch Commission, preliminary to the offe by the utility of $115,000,000 of funding bonds.

That application to begin cons tion in 1945 has been made to the Production Board was revealed in registration statement, though it final action would depend upon re of a pending investigation and the curing of necessary approval of pu bodies.

ENGINEERING NEWS-RECORD. Published every Thursday. **Return postage guaranteed.** Vol. 133, No. 17. **Price 25c per copy. Allow at least** ten days for ch of address. All communications about subscriptions should be addressed to the Director of Circulation, 99-129 N. Broadway, Albany, 1, N. Y., or 330 W. 42nd St New York, 18 N. Y. Subscriptions, United States, U. S. Possessions and Latin American Republics, $5.00 for one year, $8.00 for two years, $10.00 for three y Canada, $6.00 for one year, $10.00 for two years, $12.00 for three years. Great Britain and British Possessions 60 shillings for one year, 120 shillings for three y All other countries, $9.00 for one year, $18.00 for three years. Entered as second-class matter October 29, 1936, at the Post Office at Albany, N. Y., under the A March 3, 1879. Printed in the U.S.A. Cable Address: "McGrawhill New York." Member A.B.P. Member A.B.C. Copyright 1944 by McGraw-Hill Publishing Co Inc., James H. McGraw, Founder and Honorary Chairman; James H. McGraw, Jr., President; Howard Ehrlich, Executive Vice-President for Business Operations; Abbink, Executive Vice-President for Editorial Operations; Curtis W. McGraw, Treasurer; Joseph A. Gerardi, Secretary; J. E. Blackburn, Jr., Circulation M **Publication office: 99-129 North Broadway, Albany, 1, N. Y. Editorial and Executive Offices: 330 West 42nd St., New York, 18.** District Managers and Branch Fred G. Hudson, 530 N. Michigan Ave., Chicago 11; 758-9 Oliver Building, Pittsburgh; J. W. Otterson, 68 Post St., San Francisco, 4; Aldwych House, Al London, W. C. 2, England; Washington; J. M. Spackman, New York; A. B. Cozzens, Philadelphia; E. E. Duff, Jr., Cleveland; B. F. Horn, Detroit and Ch W. G. Payne, St. Louis; R. N. Phelan, Los Angeles; J. I. Ballard, Boston; Ralph Maultsby, Atlanta, Ga.

...loating bridges, concrete caissons ...e components of artificial harbors

...ding the time when full tech- ...details of the two artificial har- ...sed for the Normandy invasion ...e given, photographs released on ...3 add something to what already ...een published (ENR—Oct. 19, ...ol. p. 461).

...h harbor—American and British ...ally consisted of two protected ...rages, one for shallow-draft ves- ...ormed by sinking old freighters ...arships bow to stern to make a ...water in about 25 ft. of water, and ...her for larger vessels formed by ...g concrete caissons end to end to form a breakwater in about 50 ft. of water. Farther out a floating breakwater, consisting of freighters and special units submerged until they were just awash, absorbed the bulk of the wave force before it struck the concrete caissons.

The American deepwater harbor was badly damaged by a storm, and thereafter only the shallow draft-harbor functioned, but both the British harbors, not being completed until after the storm, have been operated to capacity since. The accompanying airview is of the British deepwater harbor, showing the concrete caisson breakwater and the floating bridges that reached to shore from pierheads consisting of barge shaped platforms mounted on huge spud legs.

The artificial harbors were of British conception, and the various components were designed and prefabricated by the British. The American harbor units were installed by the U. S. Navy Seabees.

British combine photo

...deepwater harbor is protected by line of concrete caissons (right). ...ing pier of spud-anchored barges is connected to shore by floating bridges.

• • •

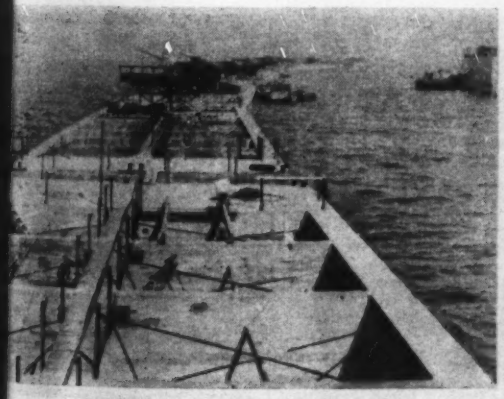
Portland, Ore., to remedy Willamette pollution

Voting to accept the $12,000,000 sewage disposal bond issue bid of the Harris Trust & Savings bank of Chicago, the Portland, Ore., city council in mid-October was a step nearer correction of a pollution problem in the Willamette River which has created unsatisfactory sanitary conditions and has affected adversely the fish industry.

Slated for construction when materials are available, the sewer system project as proposed by New York consulting engineers, headed by Robert Moses, provides for interceptors on both sides of the Willamette River, which divides the city. These would be joined with a primary treatment plant to be erected near the southeast end of Smith Lake, from where the sewage would flow by gravity into the Columbia River.

Bid of the Harris firm on the bond issue carries an interest rate of 1.49759 percent, which is well under the city's two percent limit.

Preliminary studies of Portland's sewage disposal problem showed that if sewage were to be discharged into the Willamette, it would have to receive 90 percent treatment. Discharged into the Columbia, however, it need only receive primary treatment due to the minimum flow of 40,000 sec. ft.



...g on the bottom in 50 ft. of water with 10-ft. free- ..., these concrete caissons, 200x60 ft. in plan, formed ...mits of the deepwater harbor.

Press Association photo

Floating bridges made up of double bowstring truss spans connected the shore with the ship berths at their outer ends. The bridges were towed to France from England.

Fig. 1. Forty-five demountable war houses are floated down the Ohio for 577 mi. for reuse at Camp Breckenridge,

Demountable War Houses on the Move

The mass movement and relocation of demountable houses, many of them built during the early stages of the war housing emergency and no longer needed in their present locations, is now in evidence.

A major project completed recently required that 45 houses, comprising 120 dwellings units, be transported on barges down the Ohio River from Point Pleasant, W. Va., to Camp Breckenridge, Ky., a distance of 577 miles. This is one of the first large scale projects to be carried out under a program instituted by the National Housing Agency to promote the re-use of publicly financed war housing wherever possible. The NHA anticipates the removal and relocation of possibly 3,500 dwelling units and 1,600 dormitory units within the near future.

Buildings involved in this first large scale operation were of two sizes- 24 x 56-ft. unit and another 24 x 112 The smaller units were moved int while the larger houses were cut i two sections for convenient loading the barges. They were towed down river as illustrated in Fig. 1; each sh ment comprised 60 units.

The procedure used in moving houses was as follows: After all util service lines had been disconnect

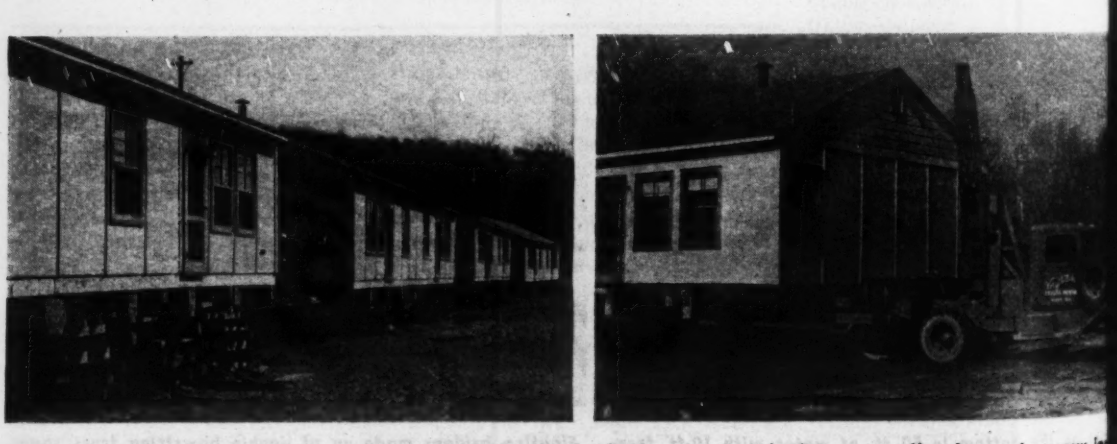


Fig. 2. After utility service lines are disconnected, the two-family houses are raised on supporting beams by screw jac located along the outside edge of the structures. This procedure permits the loading of each house on a specially signed truck trailer (right) for transport to the Ohio River.

3. At the river bank two parallel lines of 2 ft. 5-in. narrow-gage track, spaced 22 ft. c. to c., are provided. Lowered screw jacks from the trucktrailer, the house is placed on two pairs of flanged-wheel dollies. It is then rolled by gravity down the inclined runway onto barges. A wrecker equipped with a winch attachment is used as a braking device.

dwelling was raised with screw s and timber cribbing, inserted as n in Fig. 2 (left). The structure was lowered onto a specially de- d truck trailer, 16 ft. wide by 50 ng, Fig. 2 (right), and transported e Ohio River for shipment.

the river loading site two parallel of narrow-gage track were con- ted (Fig. 3), and the houses were ed from the truck trailer onto two ed-wheel dollies resting on the runway. They were then rolled ravity down the incline onto the s, as indicated in Fig. 4.

Project Cost Data

portation	
equipment	$192,300 ($1,602 per unit)
vement	
w site	107,576
welling buildings, e and equipment	17,846
ctural and engi- ing service	16,200
	$333,922 ($2,782 per unit)

en the 577-mile trip down the was completed, the houses were ded from the barges in a similar er, and delivered by truck trailer e relocation site about nine miles the river landing. Each house was its proper location, lined up and d level. Foundation piers then were constructed, thus completing the project.

Cost of the entire operation was $333,922, divided as shown in the accompanying table.

The $1,602 unit cost of relocating the 45 dwellings, according to the NHA, compares with a cost of $3,145 for new construction of a similar type.

Neighborgall & Leach, Inc., Huntington, W. Va., was the contractor. For the Federal Public Housing Authority of NHA, the following personnel was in charge at Camp Breckenridge: Murray F. Wallant, project engineer; Charles Williams, Jr., building inspector; and Ralph E. Conzelman, mechanical engineer.

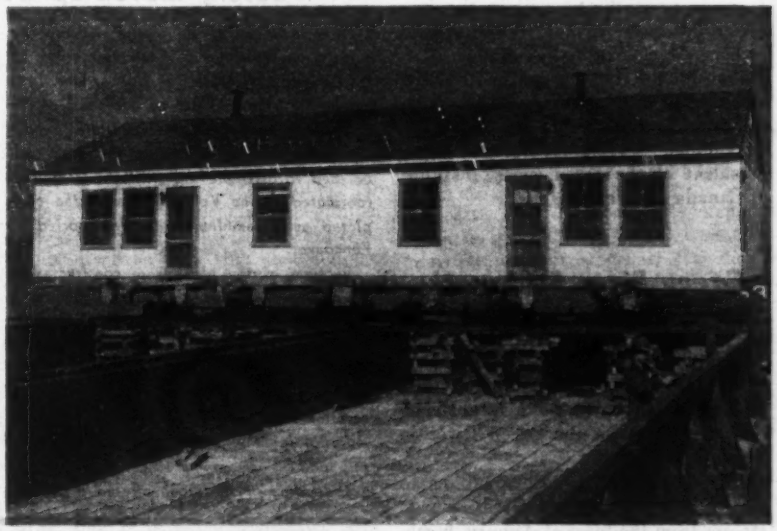


Fig. 4. Narrow-gage track extends across two 26 x 100-ft. standard sand and gravel barges lashed together. The house is raised on screw jacks to permit removal of rails and dollies. The structure is then lowered to rest on the sides of the barges for the trip down river.

Canada names engineer to head postwar work

Important changes in the Canadian Government were announced by Prime Minister Mackenzie King Oct. 13. C. D. Howe, engineer member of the federal cabinet, is appointed Minister of Reconstruction in charge of the new Ministry of Reconstruction set up by the government to deal with postwar problems and rehabilitation. Mr. Howe, in private life a consulting civil engineer of Port Arthur, Ont., retains his post of Minister of Munitions and Supply in which he has served since the post was established. Civil aviation matters will continue to be dealt with by Mr. Howe, the newly appointed Air Transport Board now reporting to him.

Since the Department of Reconstruction will be a temporary government agency, it has been designed to last for about four years after the end of the war. As housing is so important a part of postwar planning, in view of the employment it provides and the housing needs of the country, the new department will be concerned with community planning and promotional activity with reference to housing.

General Macnaughton's resignation as president of the National Research Council of Canada has been accepted and C. J. Mackenzie, dean of engineering at the University of Sashkatchewan acting president since 1939, has been appointed president of the council. The council is moved from the jurisdiction of the Minister of Trade and Commerce and made responsible also to Mr. Howe, as Minister of Reconstruction, in view of the demands which may be made upon the council in the immediate postwar period.

Dean Mackenzie is a graduate of Dalhousie and Harvard universities. He has been on the staff of the University of Saskatchewan since the founding of its College of Engineering. He was president of the Engineering Institute of Canada two years ago.

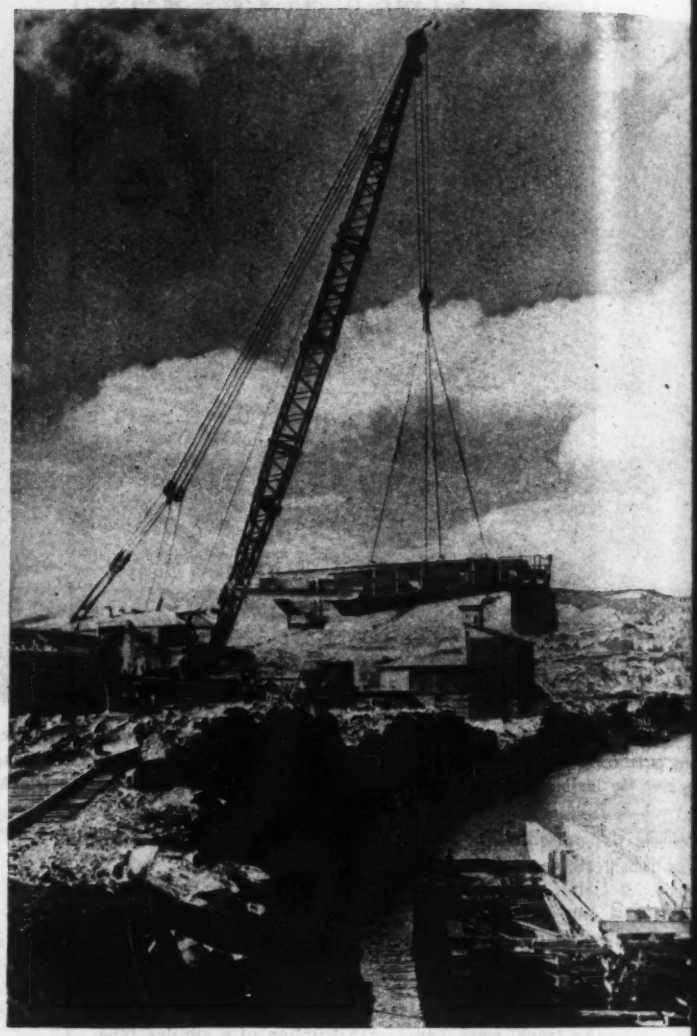
• • •

Green River field work is nearing completion

Completion by Army Engineers of field work on an investigation ordered in 1936 by Congress for a large flood-control project on the Green River in Washington is near.

Purpose of the project would be to reduce flood damage occurring downstream from the town of Auburn, northeast of Tacoma. Results of the survey will be given to Congress. One phase of the suggested project on which the Army Engineers will report is the advisability of constructing a dam, six miles above Auburn, as an aid to flood control.

Investigation of possible foundations for a dam are still under way, the being performed by the Guy F. son Co. of Seattle and the Di Drill Contracting Co. of Spoka



Factory moved up Columbia River by barge

Transportation of an entire factory by barge from Vancouver, Wash., 80 miles up the Columbia river to The Dalles, Ore., was a recent job carried out by engineers of the Henry J. Kaiser Co. At The Dalles, where more manpower is available, the plant will be used to assemble ship sections from steel fabricated in the Vancouver yard, the completed sub-assemblies being transported to Vancouver.

Sections of the plant were constructed at Vancouver and taken upstream in two barge loads. Including a 100-ton crawler crane, the two shipments weighed more than 900 tons. The crane was taken in the first load, that it might be set up for use in unloading and erection of the plant; about 400 tons of material for the plant made up the rest of this load.

Unloading of the crane offered a problem in that the plant site is on the edge sheer basalt wall about 50 ft. high. problem was solved by running the into the bank about a mile downstream, the shore meets the water. The cran "walked" off the barge and to the co tion site under its own power.

The next load, of about 500 tons, inc two bridge cranes of 10-ton capacity each weighing 32 tons. To lift the crawler crane, which had a 100-foot was rigged with a 40-ton counterbala

Transportation of the plant was di by Fred Schlotfeldt, superintendent of tenance for the Kaiser firm at Vancouv

The picture above shows how the c crane was used to unload the bridge and other supplies needed for the fa lifting them from the barges and up on 50-ft. river bank.

ccrediting of technical institutes be undertaken by the E. C. P. D.

ineers' Council for Professional Development adds accrediting technical institutes to its work for engineering schools

rediting of the courses taught in chnical institutes that have been ized in various parts of the coun- recent years was approved by ngineers Council for Professional opment at its annual meeting held w York Oct. 20-21. The E.C.P.D. ie up of representatives of the five engineering societies, the En- ing Institute of Canada, the So- for the Promotion of Engineering tion and the National Council of Boards of Engineering Examin-

the past ten years, E.C.P.D. has ngaged in accrediting curricula ree-granting engineering schools, s approval of such engineering s is widely accepted. The new has been undertaken at the re- of representatives of the better cal institutes in order to set rds for their curricula. From ewpoint of E.C.P.D., this accred- is looked upon as desirable as a for aiding the institutes in im- g their service while at the same making it possible to coordinate development with that of the pro- al schools.

ew committee under the chair- ip of Dean H. P. Hammond of ylvania State College is being ized to handle this accrediting. s of how it is to be done are rth in the report of the E.C.P.D. ittee on Engineering Schools.

Revised reading list

revised reading list for junior ers covering general cultural cts was submitted by the Com- on Professional Training and pproved for publication so that can be distributed to young en- s. The committee reported en- ging progress on the Manual for Engineers, which is being pre- by W. E. Wickenden.

Aid for veterans

R. Cullimore, president, Newark e of Engineering, reported that the past few weeks the Com- on Student Selection and Guid- as had many requests from local authorities for guidance material turned soldiers. These men, in- of going to agencies like the Employment Service, go back to the high school staff in their home town. For those veterans wanting information concerning engineering, the publications of E.C.P.D. are being used to advantage.

Student measurement

K. W. Vaughn of Carnegie Foundation reported on the student measurement and guidance study that is being carried forward through the cooperative effort of eleven engineering schools, the S.P.E.E. and E.C.P.D. This study is an attempt to predict the performance of students in college on the basis of a questionnaire which he fills out near the start of his training. The program was expanded last year with financial aid from Carnegie Foundation and the questionnaire was revised. The expanded program has produced such encouraging results that the foundation will continue its support. Information at the freshman level can be compiled by the end of 1946, Mr. Vaughn said, but if it is desired to explore the results through junior and senior years, two more years will be required. Fifteen additional schools in this country and three in Canada have indicated an interest in participation in the study.

The method is expected to be of material help in advising returned soldiers, especially those who have interrupted their academic training. The committee is cooperating with the Veterans Administration in setting up guidance centers.

Definition needed

N. W. Dougherty, chairman of the Committee on Professional Recognition, called attention to the Illinois Supreme Court decision declaring the engineer license law of that state unconstitutional, in part because of the lack of clarity in the definition of professional engineering. This points to the need for a better definition, said Dean Dougherty, as the Illinois law was similar to the model law.

A similar point was raised by J. R. Fairman of the Consolidated Edison Co., New York, who said that if the profession is to avoid difficulties with the application of the Wage and Hour Law it must be able to define what work is professional and what is not.

In recent years question has been raised as to whether such organizations as the Institute of Radio Engineers and the Institute of Ceramic Engineers should not be represented on E.C.P.D. At this annual meeting a committee appointed to study that subject reported against such added representation until the matter had been studied by the Joint Conference Committee of the Founder Societies. That committee, which is made up of the presidents and secretaries of the four Founder societies, is now studying a closely related proposal. However, the committee recommended that, in E.C.P.D. accrediting work, one qualified representative from these organizations of specialists should be appointed to the committees named to pass on such special courses as radio engineering.

New officers

Everett S. Lee, engineer, General Electric laboratories, Schenectady, and James W. Parker, vice president and chief engineer, Detroit Edison Co., were reelected chairman and vice chairman, respectively. R. L. Sackett, acting secretary, American Society of Mechanical Engineers, was elected secretary and George T. Seabury, secretary, American Society of Civil Engineers, was named assistant secretary of E.C.P.D. New chairmen of the standing committees are C. A. Pohl, Committee on Professional Training and N. W. Dougherty, Committee on Professional Recognition.

In his annual report President Lee stressed the need for greater cooperation among local engineering groups in working for the objectives of E.C.P.D., and recommended use of the E.C.P.D. pamphlet "Will You Help" as a guide in setting up such cooperative work.

. . .

Large development plan proposed for Seattle

Seattle, Wash., is considering methods of financing a $37,000,000 five-year postwar development program. The sum of $14,000,000 must be raised to launch the program, it has been determined, and two financing methods are under consideration. One is to submit a bond issue to voters for approval. This would be limited to $3,000,000 since that is the city's debt limit. Another proposal is to submit to the voters a special excess millage levy.

More than half the projects would be financed by the self-sustaining city lighting and water departments out of their reserves and a small postwar reserve fund already set up by other departments.

FROM AN EDITOR'S NOTEBOOK

Visiting Grand Coulee, Vancouver's shipyards, Shasta Dam and the Tacoma Bridge model laboratory, an ENR editor also reports on the Alcan Highway, and Portland's sewage disposal plans.

TVA engineers help Russia

Enroute Spokane, Wash.—It's a long time between meals on the Great Northern railroad these days, and Tennessee Valley Authority directors, even like editors, must find additional sustenance because the dining car is open only in the morning and again in the early evening. Thus it was that James P. Pope and I found ourselves sharing a bag of popcorn purchased from a platform vendor when the *Empire Builder* made a mid-day watering stop at Fargo, N. D. In his role as a director of the TVA, Mr. Pope had addressed the American Public Works Association meeting in St. Paul the night before and, like myself, was now on the way to visit some of the big dam projects in the Pacific Northwest. Among other things, I was eager to hear something about the arrangement by which TVA engineers were cooperating with Russia on the design of hydroelectric projects. Many consultants, I knew, were very much concerned over this apparent invasion of a governmental agency in a field of activity normally reserved to engineers in private practice.

Mr. Pope saw no cause for alarm in this regard, however. The present arrangement, he stated, forms part of U. S. "lend-lease" commitments, whereby the Treasury Department reimburses the TVA for the time spent by its engineers in collaborating and checking on the design of proposed Russian power plants. None of the work concerns actual design or construction of dams. Mr. Pope explained at length that this activity involved temporary lend-lease commitments, and had no implications beyond that phase of the war program.

Power sensed and seen

Grand Coulee Dam—Power, sensed and seen, captures the attention of the visitor to Grand Coulee today. The hum of generators and the white water cascading down the spillway manifest the energy-potential of what is now the greatest single source of power production in the world. In one month alone recently, some 621,000,000 kw.-hr. was turned into the Pacific Northwest power grid from Grand Coulee.

All this becomes more impressive when it is pointed out that less than half the generating facilities have thus far been installed at Coulee. And two of the eight generators now working are only 75,000 kw. units temporarily "robbed" from the Shasta project in California; the Coulee generators, of which only six of the eighteen are installed, are rated at 108,000 kw. each.

With the exception of repair operations to the spillway bucket on the dam (*ENR*, July 13, 1944, vol. p. 41) new construction operations at Grand Coulee are virtually at a standstill, but A. F. Darland, construction engineer on the project, is looking hopefully to an early start on the irrigation works that will comprise the second step of the Grand Coulee development. It will be recalled that this involves the installation of two dams in the coulee or dry gorge that was eroded by the Columbia River in the prehistoric past when it was temporarily forced out of its natural course by an ice cap. These earthfill dams—at opposite ends of the coulee—will form a basin some 25 miles in length and from 1½ to 5 miles in width.

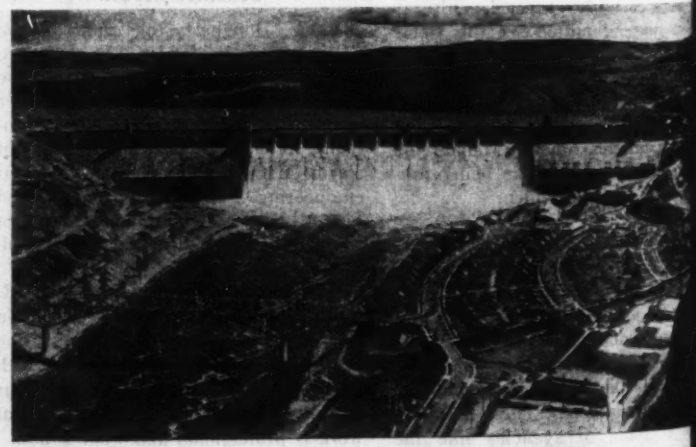
Water will be lifted 70 ft. from the huge lake now formed by Grand Coulee dam and stored in the basin; from there it will flow by gravity for the irrigation of some 1,200,000 acres. The earthfill dams, pumping plant, canals and appurtenant facilities for irrigation are estimated to cost $208,000,000. Plans are ready and locations surveyed to permit starting work on the dams as soon as war restrictions on construction materials are lifted; the dams are estimated to cost, respectively, 1½ millions of dollars.

Tacoma Bridge studies

Seattle, Wash.—Since the Tacoma Narrows Bridge failure in 1940 no subject has been more challenging to the civil engineer than the action of aerodynamic forces on bridges. And at no place is the matter being given more careful study than at the University of Washington where the Washington Toll Bridge Authority and the U. S. Public Roads Administration are pioneering in model studies. The work centers around a wind tunnel with a throat 10x100 ft. in cross-section. To appreciate the huge size of the tunnel area one might recall that it is ten times the size of the new wind tunnel employed at the Boeing aircraft laboratory also located in Seattle. (*ENR*, May 4, vol. p. 644; Aug. 10, vol. p. 174.)

Within the tunnel there has been erected a model of a re-design of the Tacoma-Narrows suspension bridge, built to a linear scale of 1:50. More than scale in linear dimensions has been achieved with this model; it duplicates, in comparative scale, the shape, stiffness and stress of the prototype. Thus it can be used to reproduce precisely the effect created by varying wind velocity, a change in design, or a combination of both.

While work to date has not progressed to the point where conclusions are available for publication, it is no secret that the Authority in cooperation with the PRA is making history and pointing the way in aerodynamic analysis of bridges. Directing these studies is Charles E. Andrew, consulting engineer.



Grand Coulee Dam—world's largest single source of power—as it looks to

e Authority; the laboratory work is ucted by F. B. Farquharson, pro- r of civil engineering at the Uni- ty of Washington.

twar sewage disposal plans

rtland, Ore.—Ray Koon, of the of Stevens and Koon, one of the p of consulting engineers on the land sewage disposal improvement ram, can tell a story about post- planning progress that is stimulat- In May of this year the citizens a $12 million bond issue for the ovement work, a short time later cres of land was acquired for the of the proposed treatment plant and now detailed plans and specifica- are being prepared!

w communities can equal this rd of acceptance of local responsi- in postwar planning, and, as if were not enough, the city fathers Portland will sell the bond issue month, and reinvest the money in Bonds, which can be cashed as ed to pay for work completed. To a final fillip to the story of Port- 's farsightedness, it should be stated the city initiated a sewer rental nue plan in 1940 (consisting of a percent surcharge on water bills) the returns from this have made it ible to finance engineering fees on ay-as-you-go" basis.

an Highway?

ncouver, B. C.—"What's going to en to the Alcan Highway in the war period?" That seemed to be a inent question to ask a Canadian neer whose work and travels had ght him into close contact with the way development as well as much e country it traverses.

Not much," was the pessimistic er of this engineer who had just rned from an aerial reconnaissance e area. Explaining that his official ion made it desirable to cloak per- l opinions with anonymity, he then on to decry the unfortunate pub- that painted the Alcan as the highway over which tourists would in the better days ahead. Not would it be difficult for tourists ch the highway, but once they got they would have 3,600 miles of riding—1,800 miles up and the distance back over the same route their trouble. And there are not gh attractions—scenic or other- —to compensate, he thinks, for the ulties.

his opinion, it is highly ques- ble whether the Canadian govern- (to which the highway reverts six hs after the war's termination)

Press Assoc. photo

The Alcan Highway, opened in the Fall of 1942, is still a military road.

can afford the maintenance of a road through the wild and isolated country it traverses. Already, he pointed out, maintenance costs have been tremendously high, particularly at stream crossings. Furthermore, to make the highway practicable for tourist travel would call for the installation of a wide variety of facilities—such as hotels, gas stations and repair shops—that now do not exist.

On no score did this Canadian engineer question the desirability or location of the Alcan Highway as a war facility, but it was his firm conviction that it would have no usefulness in Canada's postwar activities.

A ship every 26 days

Vancouver, Wash.—Mass production of ships is almost commonplace, yet one cannot come away from a shipyard without the feeling that here is "big time" construction at its best. The record of the Kaiser Co's. Vancouver yard bears this out—26 days is the elapsed time from keel to launching of the 524-ft. Attack Transport Ships (APA's), and every four days another hull slides down the ways. Some 32,000 employees are engaged at this yard, 25 percent of whom are women.

Vacuum concrete at Shasta

Shasta Dam, Calif.—With some 6,000,000 cu.yd. of concrete in place, Sunday work at Shasta Dam was ended recently, and Ralph Lowry, construction engineer in charge of the project for the Bureau of Reclamation, was entitled to a day off. But a couple of *ENR* editors made their appearance and spoiled that prospect for the obliging Mr. Lowry.

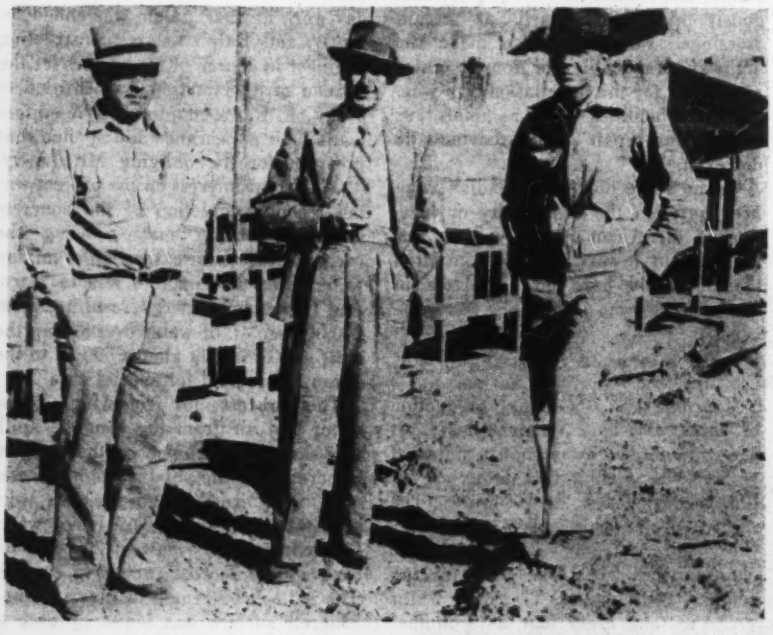
Of current interest on the project was the recent completion of the concrete spillway wearing surface using the vacuum process for extraction of mixing water after the concrete was in place. The tremendous energy resulting from 200,000 sec.-ft. of water overflowing the crest and dropping almost 500 ft. to the apron floor called for special care.

The process for removing excess water and air from the concrete spillway surface, developed by the Vacuum Concrete Co., Inc., of Philadelphia, was used with excellent results, we were told. An average of 0.67 lb. of water was extracted at a cost of 20 cents for each square foot of processed surface. The indicated strength of the vacuumed concrete surface was found by tests to by 2.6 times higher than the strength of wood-formed concrete surface material.

MEN AT WORK

One of the favored meeting places at Ross Dam, which is being built by Seattle's municipal light and power department is "Damit Hall". Following a hearty lunch, this group emerged recently: Left to Right (top row): H. B. GRAVES, assistant designing engineer, city light dept., C. E. SHEVLING, assistant resident engineer, city light dept., W. C. HALL, senior engineer, Seattle Park Dept; E. R. HOFFMAN, superintendent of lighting. Left to Right (bottom row): H. F. FAULKNER, resident engineer, city light dept.; HARRY L. HEWES, Office of Information, Federal Works Agency, Washington, D. C.; W. B. WOLFENDALE, project engineer, city light dept.; NICOLAI AALL, construction engineer, Federal Works Agency, Seattle.

On a busman's holiday D. G. (BUN) DON, Denver contractor, and his son visit the Leadville drainage tunnel at ville, Colo.



C. J. WATT, (center) engineer for the Water Conservation and Irrigation Commission of Australia, stands between E. L. ARMSTRONG (left) and U. V. ENGSTROM, engineers for the U. S. Bureau of Reclamation, on an inspection of Anderson Ranch Dam, Idaho.

Although stationed in Washington, D. J. L. HARRISON, highway engineer wit Public Roads Administration, has a good portunity to add to his wide experien tropical work, for he is assigned to the offices supervising work on the Inter-Ame Highway.

MEN AND JOBS

Maj. George N. Eagle, Sn.C., has appointed chief engineer and assistant chief of party in Brazil for the health and sanitation division of the office of the Coordinator of Inter-American Affairs. He succeeds H. G. Baity, returned to this country recently to resume his duties as head of the sanitary engineering department of the University of North Carolina after two years absence. Major Eagle, who was one of the staff engineers in the Brazil field party, was at one time assistant city engineer of Columbus, Ohio. For seven years prior to his entry in the Army served as an assistant sanitary engineer with the Ohio State Department of Public Health.

Lt. Wallace R. Jones, in foreign service for more than two years, is now with the Engineer Corps on an Aleutian island construction project. He was graduated in civil engineering from Ohio State college in 1942.

J. F. Taylor, for many years engineer of bridges and structures for Ottawa, Ont. has resigned.

Theron W. Ragsdale, formerly chief of the construction and operations division, in the U. S. Army Engineers office, Portland, Ore., has been promoted to executive assistant to the district engineer, Col. Ralph A. Tudor. **Robert E. Wilson** succeeded Ragsdale.

Joe Terry has been named division engineer in the Tulsa, Okla., district by the Oklahoma State Highway Department, replacing M. C. Shibley, who had been with the department for about 20 years. Mr. Terry has been with the department for many years and has served as assistant division engineer at Clinefs and Oklahoma City.

Lt. E. B. Wilson is now in charge of the U. S. Army Engineers' office at Oklahoma City, Okla. He succeeds **Lt. E. A. Cornell,** who has been transferred to the division office at Dallas, Tex.

Joseph T. Waugh, post engineer at the Army airfield at Alliance, Neb., has been promoted to major.

Lt. D. Huether has been appointed engineer of Brockville, Ont. A graduate of the University of Toronto in engineering, Mr. Huether has had wide experience in the east of Canada recently on the staff of H. G. Acres and Co., on the Shipshaw power project in Quebec, and more recently with Gore and Storrie, consulting engineers of Toronto.

1st Lt. Lycurgus B. Ward, who was employed by the North Carolina State Highway Department in Raleigh, N. C., and later served as city engineer at Wilson, N. C., prior to entering the Army in 1942, was wounded in action in France Aug. 12 and is recuperating in a hospital in England. Lieutenant Ward was graduated from the North Carolina State College, School of Engineering in 1938 and has been overseas since October 1942. He participated in the invasion of North Africa and Sicily.

Capt. Mark Hargis, has been relieved of his Army duties and is back at his former position of assistant engineer at Oklahoma City, Okla.

Hugh Harris has reopened offices at Greensboro, N. C., as a landscape architect and engineer after having recently done city planning and zoning work in South Carolina and Tennessee.

Brig. Gen. Edwin H. Marks has been appointed to succeed Col. Robert R. Nayor as engineer for the Southwest division of the U. S. Army Engineers, which takes in Oklahoma, Arkansas, Texas, Louisiana and New Mexico, with offices at Dallas. Tex.

Duffy Murry, Bureau of Reclamation project engineer on the Dodson pumping unit of the Milk River irrigation project near Great Lakes, Mont., has been transferred to Missoula, Mont., where he will become project engineer on the Bitterroot irrigation project. He will be replaced at Dodson by **Merle Savage** of Williston, N. Dak.

Maj. Arthur Benesch, Springfield, Ill., after serving some 18 months as engineer in charge of the northern district of Iran, is now on duty in the United States. Before joining the army in 1942, Major Benesch had spent eight years with the Division of Highways, Illinois Department of Public Works and Buildings.

John A. Fleming, general secretary of the American Geophysical Union of the National Research Council, has announced the appointment of **Waldo E. Smith** to the newly created post of executive secretary of the union. Mr. Smith has recently been engaged on hydraulic engineering and hydrologic studies with the Public Roads Administration, Washington, D. C.

George Vandorp, veteran of 20 years in the Toledo, Ohio, water department, has been named water commissioner to succeed the late Robert Furman. **Jesse Giesey,** division engineer, will become superintendent of operations, a position formerly held by the new superintendent. **Albert Kruger,** department employee for 35 years, will be superintendent of filtration.

J. A. Doucet, Fredericton, N. B., has been named minister of the Department of Reconstruction and Industry in the provincial government of New Brunswick.

Lt. Robert F. Weber, engineering officer for the past year and a half at the Naval Air Station, Fort Lauderdale, Fla., is leaving for an assignment abroad. He is being replaced by **Lt. Stuart B. McKinney.**

The retirement is announced of **Col. W. G. Swan,** Vancouver, B. C., engineering authority, who has been chief engineering officer, Pacific Command, since July, 1942. He was appointed district engineering officer early in 1941 with headquarters at Work Point Barracks, Victoria, with the rank of major. Subsequently he was promoted to lieutenant-colonel, and in July, 1942, was promoted to full colonel and named Command Engineering Officer for the whole of the Pacific Command. His successor will be **Lt.-Col. Frank S. Milligan,** present district engineering officer of Military District No. 2, Toronto, Ont.

Fred Slikkers, assistant chief engineer at the municipal power plant of Holland, Mich., for more than 12 years, has been named chief engineer by the board of public works. Mr. Slikkers succeeds the late Bert Smith.

James R. Neff, former civil engineer at Kalamazoo, Mich., at present serving with an engineering unit in New Guinea, has been promoted to captain.

Milton J. Kluttz, Jr., of Raleigh, N. C., formerly an engineer for a highway contractor at Chapel Hill, N. C., recently was promoted to first lieutenant from second lieutenant at the Army Air Field at Rome, N. Y., where he is attached to the maintenance division.

Port Authority plan proposed for Chicago

A municipal authority, similar to the Port of New York Authority, is being considered by Chicago, according to Mayor Kelly. The new authority would control all municipal terminal projects, including railroads, airports, piers for lake shipping, trucking, storage terminals, and the like. Although the new body would have no taxing authority, it would be empowered to issue revenue bonds for construction and development of the necessary facilities.

Preliminary studies as to the feasibility of the plan are being made by Joshua D'Esposito, project engineer for the city's Department of Subways and Superhighways, and representative of the Federal Works Agency. Although present studies indicate a solution of the problem, legislative action would be necessary to establish the authority.

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International survey of Columbia River planned

A special board of United States and Canadian engineers have concluded a meeting in Ottawa, Ont., with members of the International Joint Commission where they discussed plans for a joint survey of the economic use of the Columbia River in the two countries. The meeting reviewed initial steps to be taken in surveying water and power development, water storage and irrigation, land reclamation, fish conservation and improvement of navigation. The members of the board are: Maj. Gen. T. M. Robins, Deputy Chief of Engineers, U. S. Army; Glen L. Parker, chief hydraulic engineer, U. S. Geological Survey; Victor Meek, controller of the Dominion Water and Power Bureau; and F. G. Goodspeed, supervising engineer, Department of Public Works, Canada.

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Massachusetts taxpayers oppose highway bill

The Massachusetts Federation of Taxpayers Associations has gone on record in opposition to the federal Postwar Highway Relief Bill now before Congress. They consider the bill inequitable and urge adjustments to remedy what they call a distribution of funds that is nothing more than a subsidy to backward states. The pending bill, it is pointed out, would require Massachusetts taxpayers to pay $53,005,000 while the state would receive only $26,355,000 in return.

Local governments to match road funds

(*Continued from page* 1)

user money is used, Florida and Texas divert receipts for education; Louisiana and Pennsylvania for the general fund, with Louisiana, however, diverting a portion for harbor developments; Nebraska for public relief; and Tennessee to pay off non-highway bonds.

The totals, which add up to nearly $4,000,000,000 for the three years, are of interest in connection with a statement made by Commissioner of Public Roads Thomas H. MacDonald when he testified before the Senate Roads Committee in connection with proposed federal-aid legislation. Mr. MacDonald said that if the states used all their income from motor vehicles and the uses of motor vehicles of various kinds, they would have more than enough to take care of main state highways, the federal-aid system, major streets within cities, and the main county roads.

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Cincinnati area plans industrial construction

About $20,000,000 of construction of new buildings, additions to present plants or remodeling of existing facilities is being considered by industries and commercial enterprises in Hamilton County, Ohio, for after the war, it has been announced by the Cincinnati area Committee for Economic Development.

Of the total, $12,500,000 in building and construction work is definitely planned and about $8,000,000 additional is under consideration. The $20,000,000 total will provide more than 4,000 man-years of construction work, it is estimated.

No estimates of public works or residential building have been made but a total of $41,000,000 of bond issues will be on the November ballot for public improvements in Hamilton County.

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FWA approves contract for a Tampa dam

Award of a contract by the city of Tampa, Fla., to Lewis and McDowell, Inc., of New York, for construction of a dam on the Hillsborough River to impound water for the Tampa municipal waterworks has been concurred in by the regional office of the Federal Works Agency. The contract is for $148.013. The project is financed jointly by the city and the federal government.

MEETINGS

National

NATIONAL COUNCIL OF STATE BOARDS ENGINEERING EXAMINERS, annual mee Hotel Lafayette, Lexington, Ky., Oct. 3

AMERICAN INSTITUTE OF STEEL CONS TION, annual meeting, Claridge H Atlantic City, N. J., Oct. 31-Nov. 2.

CANADIAN INSTITUTE OF SEWAGE AND S TATION, annual convention, Royal Y Hotel, Toronto, Ont., Canada, Nov. 2-3.

THE PRODUCERS' COUNCIL, INC., 21st annual meeting, Hotel Roosevelt, New Y N. Y., Nov. 27-29.

AMERICAN ASSOCIATION OF STATE HIGH OFFICIALS, annual meeting, Nether Plaza Hotel, Cincinnati, Ohio, Nov. 2

Regional and Local

CONFERENCE ON INDUSTRIAL WASTE UTI TION, sponsored by the Sanitary Engi ing Department, School of Civil Engi ing and Engineering Mechanics, Pu University, and other organizations of state, Purdue University, Lafayette, I Nov. 29-30.

ENGINEERS' SOCIETY OF WESTERN PENN VANIA, 5th annual water conference, liam Penn Hotel, Pittsburgh, Pa., Oct. 30

CAROLINA BRANCH, ASSOCIATED GEN CONTRACTORS OF AMERICA, 24th an meeting, Carolina Hotel, Southern Pi N. C., Oct. 30-31.

NEW JERSEY SECTION, AMERICAN WA WORKS ASSOCIATION, annual meeting, H Madison, Atlantic City, N. J., Nov. 2-4.

FOUR-STATES SECTION, AMERICAN WA WORKS ASSOCIATION, wartime confer jointly with the PENNSYLVANIA WA WORKS OPERATORS' ASSOCIATION, Benja Franklin Hotel, Philadelphia, Pa., 8-10.

ILLINOIS WATER PLANT OPERATORS' A CIATION, annual convention, Leland H Springfield, Ill., Nov. 9.

VIRGINIA SECTION, AMERICAN WATER WO ASSOCIATION, John Marshall Hotel, R mond, Va., Nov. 14-15.

SOUTH DAKOTA WATER AND SEWAGE WO CONFERENCE, annual meeting, Lincoln H Watertown, S. D., Nov. 14-15.

FLORIDA SECTION, AMERICAN WATER WO ASSOCIATION, Suwannee Hotel, St. Pe burg, Fla., Nov. 16-18.

ILLINOIS SEWAGE OPERATORS' ASSOCIA annual conference, Leland Hotel, Spr field, Ill., Nov. 28-29.

AMERICAN SOCIETY FOR TESTING MATER and American Institute of Mining Metallurgical Engineers, Symposium Stress-Corrosion Cracking, Benjamin Fr lin Hotel, Philadelphia, Pa., Nov. Dec. 1.

City managers consider present and future problems in their field

Municipal finances, urban development, and efficient management are discussed by International City Managers' Association

How to obtain more efficient city nagement in the postwar era, in the ht of wartime experiences gained ough doing more work with less rsonnel, was one of the chief topics discussion at the 31st annual meet- of the International City Managers' sociation held in Chicago Oct. 12-17. er problems of the conference in- ded manager-departmental head ations, trends in urban planning, struction and operational revenues municipalities, general civic devel- ments, and the necessity for in- ased activity in the preparation of mpleted project plans.

Relative to the promotion of addi- nal revenues for municipal construc- n and operation, it was the con- sus of a panel meeting that such ds might well be increased sub- ntially by the adoption of more ef- ent methods of operation. This is in e with the general thought of the ference, that city government is a vice operation and as such should der efficient service at the least pos- le cost.

Postwar planning is deficient

A pessimistic picture of the inade- acy of postwar public works plan- g was painted by Walter H. Blucher, ecutive director, American Society of nning Officials, Chicago. Said he, ostwar public works will not pro- e any tremendous amount of em- yment. Furthermore, we have failed do an effective job of getting public rks plans actually ready."

Referring to the report of proposed blic works, issued last month by Federal Works Agency (*ENR*, pt. 21, vol. p. 331), Mr. Blucher inted out that plans for little more an $1 billion worth of projects are tually ready, and only $300 million funds with which to finance this ogram are on hand or have been ar- nged for. Moreover, of the addi- nal $12 billion reported to be in rious stages of design, a large ma- rity is in the idea or "hallucination" ge, as he put it.

In closing, Mr. Blucher outlined ree methods by which cities can ex- dite their postwar planning: (1) propriate an adequate sum of money build up a planning staff, if such a ff can be found, and go to work;) assign sufficient funds and go out into the open market to find somebody who will do the proper job of planning; and (3) set apart a modest sum of money and organize the community itself to do a planning job, with or without expert advice.

Equitable revenues

That cities should share in state-collected taxes as a right rather than as a grant is one of the chief hopes in both present and postwar planning, asserted Carl H. Chatters, executive director, Municipal Finance Officers Association, Chicago. Such distribution of revenues would be equitable, he said, because the cities have the expense but are not allowed the share of collections to which this expense entitles them. As an example, Mr. Chatters cited the state-collected gasoline and motor license levies, which, he asserted, were inequitably diverted into state treasuries.

Not many new and significant sources of city revenues have been developed, said Mr. Chatters. Exceptions to this are, however, the current trend toward the increased use of parking meters and the increasing possibility of a municipal tax levied on gross earnings of individuals, such as the one percent payroll tax now used by Philadelphia.

Speaking of the outstanding features of postwar municipal debt, Mr. Chatters predicted that interest rates on municipal securities would continue to be low, unless there is a removal of the tax-exempt feature on such bonds, or an unexpected volume of new municipal securities issued during the postwar period.

Better urban planning needed

In discussing the effect of recent social and economic trends on urban planning, Louis Wirth, professor of sociology, University of Chicago, warned that the postwar period has already arrived for many cities, and that the foundations for a wholesome life for these cities must be laid now.

One of the most serious factors to be reckoned with in postwar city and urban development, said Professor Wirth, is the fact that the former seemingly limitless growth of our cities has come to an abrupt end. Although the southwestern and northwestern states continue to show some of the exuberant growth of frontier regions, due largely to gigantic power developments and the reorientation of America to the Pacific, the shift of population to these areas has definite limits.

Unless our economy can absorb the increased productive capacity which the war has created, and unless markets can be found for a volume of goods and services nearly twice as great as before the war, and unless an unlikely reversal in our birth rate or immigration policy takes place, all hopes for a revival of urban growth are almost certain to be dashed, he said.

Despite the reduction of long-term indebtedness and short-term borrowings, and the accumulation of surplus funds by many municipalities, problems of taxation will be of a most difficult nature after the war, asserted Prof. Wirth.

Urban planning, he said, must take into account the changing rate of growth in cities as well as the pattern of this change. The present trend towards decentralization of industry within urban areas will accentuate the decay of central cities and of the inner cores of many towns. Only large-scale rebuilding of our cities, especially at or near their centers, will halt this catastrophic trend, concluded Professor Wirth.

Lessons from Europe

Cities no longer can look only within their own boundaries to determine the most effective methods of planning postwar construction. Rather, they must watch what other cities are accomplishing in these fields, declared Louis Brownlow, director, Public Administration Clearing House, Chicago. A world-wide outlook is essential for proper and adequate planning, said he, and it is the duty of civic officials to learn to apply to their home town those methods of civic rebuilding and improvement now being inaugurated in other parts of the world.

Many lessons in rebuilding blighted areas are to be learned from work now going on in destroyed European cities, while valuable information in this field can be obtained from such work being prosecuted in Latin America, or in the Orient where tremendous rebuilding will be done after the war, said Mr. Brownlow.

New officers

J. R. French, city manager, Verdun, Que., was elected president of the association for the forthcoming year, succeeding Frank C. Hanrahan, Arlington County, Va. Newly elected vice presidents are as follows: Wm. N. Taylor, Port Arthur, Tex.; H. A. Yancey, Greensboro, N. C.; and E. M. Shafter, Royal Oak, Mich.

Equipment needs are being stabilized

(*Continued from page 1*)

equipment situation, the construction machinery division of WPB has already revoked three important control orders —conservation order L-217, L-53A restricting production of small tractors, and L-196, controlling used machinery sales. Order L-53B regarding tractor parts was revised Oct. 23 to eliminate all export and domestic dealer quotas and now retains only 65 percent of critical parts for military use. It is now revising L-53, controlling tractor distribution, to allow for unregulated disposition of tractors beyond military requirements. Order L-192, controlling all other equipment, is also being revised to free all but certain critical items. The effective date of these revisions has not yet been announced, but this action is in line with the division's intention to have as few restrictions as possible in force at the end of the European war. In all cases, however, military requirements are fully protected. At present an average of 75 percent of all production of principal construction equipment items is going to the military, though in some cases, such as shovels and cranes, they get practically all the ouput.

The military authorities, of course, cannot now make any definite commitment as to disposition of equipment on hand in Europe at the end of hostilities there. Probably much of it will necessarily be retained for rehabilitation of war ravaged areas, though some, no doubt, will be transferred to the Pacific theater. Possibly repair depots will be set up overseas for putting used equipment in shape for either purpose. The manner in which the European war ends, naturally, will have a great effect on the amount of equipment available. Bitter and prolonged fighting to the very gates of Berlin will use up more equipment than a sudden collapse of Germany in the near future.

Experience in the Pacific to date has shown construction machinery to be highly expendable in island to island fighting. Intensive invasion activities leave little time for proper maintenance or even lubrication of equipment, so the units wear out fast. Then, too, as the action moves on, considerable equipment must be left behind for repair, expansion and maintenance of captured bases.

No conversion problem

Thus it appears increasingly evident that little used construction machinery will be returned from the present war fronts. The initial postwar construction program here will have to depend upon equipment now in the hands of contractors and new units in the distribution pipeline between factory and point of use when the war ends. However, indications are that these sources will be more than ample to get the program rolling. The present high rate of new production may continue for a long time to catch up with domestic demands and to supply a large foreign market which appears almost certain to develop.

Happily, there is no conversion problem in the equipment industry to delay switching of output from military to civilian requirements. Wartime production has been largely in standard items used in normal construction operations and the manufacturers have met the increased output schedules with no expansion of plant.

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White River development studied by U. S. Engineers

Members of the staff of the Little Rock, Ark., district office of the U. S. Engineers are expected to complete soon a comprehensive report on the development of the White River basin' program for flood control, navigation, irrigation, hydro-electric power, and other beneficial water uses, it was disclosed Sept. 30.

The report, which is being prepared in response to specific authorization by Congress, will be forwarded for consideration of higher authorities and then submitted to Congress.

Should a White River dam be built at Wolf Bayou, the reservoir would cover 40,800 acres, including 15,000 in cultivation, according to U. S. government estimates.

The greater part of this area lies in Izard and Stone counties, Ark. Not only would the fertile White River valley, chief agriculture source for the two counties and one of the most scenic areas in the South, be obliterated, but also one of the best timber areas in the section would be covered with water.

The reservoir would extend upstream to the Norfork Dam, now nearing completion, and several towns would be wholly or partly submerged.

A meeting will be held at Newport on Oct. 19 by Army engineers, at which time plans will be presented for construction of the project. Members of the Mississippi Valley Association stressed the importance of the project, saying it would reduce disastrous flood-time wash over thousands of acres of rich bottom lands in Jackson and Independence counties.

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Conservation division of WPB is abolished

The conservation division of the War Production Board is being abolished as of Nov. 2 at the request of the division whose officials said the diminishing amount of work to be done in connection with conservation could be handled by other WPB divisions.

JOBS OF THE WEEK

BUTADIENE CHEMICAL PLANT, Bishop, Tex.

Gasoline Plant Corp., Houston, Tex., has been awarded a contract for the design and construction of a butadiene plant by Celanese Corp. of America, New York, N. Y. The estimated cost is $2,750,000.

RUNWAYS and TAXI STRIPS, Patuxent, Md.

Bureau of Yards & Docks, Navy Department, Washington, D. C., awarded a contract for runway and taxistrips at Naval Air Station, to C. J. Langenfelder & Son, Rosedale, Md., at $1,031,647.

COMPLETING FACILITIES AT NAVAL BASE, Tacoma, Wash.

Macdonald Building Co. and Woolworth & Co., Tacoma, have been awarded a contract for completing facilities at Naval Advance Base Depot, by Bureau of Yards & Docks, Navy Department, Washington, D. C. The contract is to exceed $1,000,000.

HOSPITAL, Los Angeles, Calif.

Veterans' Administration, Washington, D. C., received the lowest bid from Robert E. McKee, Los Angeles, for constructing seven buildings at U. S. Veterans Hospital, at Sawtelle. The low offer was $1,675,000.

HOTEL, Norfolk, Va.

Admiral Hotel Corp., care of the contractor, will build a 14-story hotel to cost $2,200,000. Muhleman & Kayhoe, Inc., Richmond, Va., have been awarded the construction contract.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 16.

OBITUARY

John J. McManus, 55, city engineer Albany, N. Y., since 1934, died t. 11. He was graduated from ion College in 1910. He started as a dman with the state highway depart- nt and was soon promoted to higher sitions on surveys for highways in capital district. He was in the te service until 1917 and enlisted in Navy in 1918. While in France he de surveys for airdromes under itish control. In April, 1919, he was charged from the Navy and returned the state highway department. He t the state service in 1927 to go with lbany as deputy city engineer.

Lee Craft, 59, highway superintend- t in Fall River County since 1923. th headquarters at Hot Springs. D., died recently. He was formerly nnected with the state highway de- rtment at Kadoka, S. D.

Lester A. Fauver, 78, contractor, died Lorain, Ohio, Oct. 10. For 43 years had been head of the Ohio Engineer- g Co. which he founded.

Earl C. Sherrard, 58, who was re- nsible for much of the development plastics and other products from od, died at Madison, Wis., recently. e was chief of the division of chemi- y of wood and derived products, U. S. rest Products Laboratory at Madi- n. He was born at Montpelier, Ind., d received his education in science the University of Michigan.

Marvin Shiebler, 65, construction en- neer, died at Shelter Island, N. Y., t. 19. Mr. Shiebler was graduated in 00 from Stevens Institute of Tech- ology. After serving as a construction gineer with the Consolidated Gas Co. d Stone and Webster Co., of Boston. e organized his own business in New ork.

James L. Crandall, 77, vice president f the Crandall Dry Dock Engineering o., Cambridge, Mass., died Oct. 18. nce the start of the war, Mr. Cran- ll had directed the construction of ore than 200 drydocks for the United tates and Canadian governments.

Paul D. Sargent, 71, former highway mmissioner of Maine, at one time ssistant director of public roads, U. S. epartment of Agriculture, and later hief engineer of the Maine Highway ommission, died recently. He was a legate on behalf of the United States to the International Road Congress, Milan, Italy, by appointment of President Calvin Coolidge. In 1927 he received the degree of doctor of engineering from the University of Maine.

Burleigh L. Horr, head of the B. L. Horr Culvert Co., Rhinelander, Wis., and former Oneida County highway commissioner, died Oct 15.

Albert W. Galbreath, 60, retired civil engineer, died Oct. 15 in Columbus, Ohio. During World War I he was a captain in the 12th Engineers in France for two years. In 1933 he was advisory engineer for the Reconstruction Finance Corp. in the St. Louis, Mo., area.

Thomas F. Murray, 55, Youngstown, Ohio, assistant engineer for the Ohio State Highway Department, died Oct. 11. He had been with the highway department for 15 years and before that was an engineer for Youngstown for 10 years. He attended Duquesne University and in World War I served overseas with the Engineers.

E. Mackin Kelly, 37, for many years with the Ohio Department of Safety and Hygiene as a consulting engineer for the Dayton area, died in Columbus, Oct. 10.

James J. Burke, 70, president of the Salt Lake City, Utah, general contracting firm which bore his name, died Oct. 9. Mr. Burke was a director of the Intermountain Branch, A.G.C., and also of the Utah Light & Traction Co.

James V. Purdy, 68, of Plymouth, N. S., died Oct. 10. For about 35 years he had specialized in wharf building, with important jobs to his credit on the Atlantic and Bay of Fundy coast of Nova Scotia.

S. O. Humphrey, 80, Moncton, N. B., died Oct. 5. He was a general contractor, and did bridge construction and repairing for the Canadian National Railways. He was chairman of the board of works at Moncton.

Lyman C. Lamb, 58, for last four years a civil engineer in the War Department, Washington, D. C., died recently. He was resident engineer of Coshocton County, Ohio, for the State Highway Department until 1939 when he resigned because of ill health.

Benjamin E. Briggs, who retired in 1916 as city engineer of Erie, Pa., a post he held for 23 years, died Oct. 1.

Ernest John Garlick, 51, who represented the R. W. Hunt Co., Pittsburgh, as engineer for 35 years, the last ten as district manager in Youngstown, Ohio, died Oct. 2.

Charles J. Popelka, 53, city engineer of Beloit, Wis., for 12 years and associated with the city engineering department for 25 years, died Oct. 14. A graduate of the University of Wisconsin, 1916, he served as a 1st Lieut. in 303rd Engineers in World War I.

WEEKLY CONSTRUCTION SUMMARY

CONTRACTS

Continental U. S. Only (Thousands of Dollars)

	Week Ending		
	Oct. 28 1943	Oct. 19 1944	Oct. 26 1944
Federal	$23,780	$11,101	$8,382
State & Municipal	3,777	5,297	4,350
Total public	$27,557	$16,398	$12,732
Total private	4,428	4,414	9,442
TOTAL	$31,985	$20,812	$22,174
Cumulative 1944 (43 weeks)			$1,506,756
1943 (43 weeks)			$2,681,752

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	1943 43 Weeks	Cumulative 1944 43 Weeks
NON-FEDERAL	$289,412	$381,688
Corp. Securities	18,228	96,970
State & Mun.	105,506	143,778
RFC Loans	14,545	57,940
FPHA Loans	3,133	.....
REA Loans	20,000	20,000
Fed.-Aid Hwy.	128,000	63,000
FEDERAL	$2,753,838	$1,263,800
TOTAL CAPITAL	$3,043,250	$1,645,488

ENR INDEX NUMBERS

Index base=100		1913	1926
Construction Cost	Oct. '44	301.06	144.72
Building Cost	Oct. '44	236.00	127.57
Volume	Sept. '44	85.	87.

Ceiling prices on tires for road work continued

The temporary ceiling prices for new "off-the-road" tires made with rayon fabric, which were to have been in effect only from August 10 to October 15, are being continued by the Office of Price Administration until December 15. The problem of maximum prices will have been reconsidered by OPA by that time. These ceilings apply mainly to tires for road construction equipment.

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ELSIE EAVES, Manager *SCOTT McLEOD, Statistics* *J. A. MAHONEY, Reports*

(Daily service also available—Write for details)

WATER SUPPLY

PROPOSED WORK

Ga., Pine Lake—City, H. D. Guthrie, mayor, City Hall, $22,000 bond election Nov. 7, WW imprvs., mains, chlorinator, etc.

†Ill., Chicago—City, approx. 15,570 ft. 36 in. water feeder main in Wabansia Ave. from Cicero to Newland Aves., Ill. 11-331-N. $475,000. **FWA.**

Mass., Foxboro—Town, Town Water Dpt., Town Hall, preparing plans water sys., well testing. Whitman & Howard, 89 Broad St., Boston, engrs.

Miss., Jackson—City, W. A. Scott, mayor, making plans WW sys. addns., equip. $200,000. Black & Veatch, 4706 Bway., Kansas City, Mo., engrs.

Mo., Senath—City, V. A. O'Connor, mayor, plans bond election soon, deep well, pump, equip. and other extens., imprvs. WW sys. $25,000. Russell & Axon, 4903 Delmar Blvd., St. Louis, Zone 8, engrs.

Tex., McAllen—City, bond election soon imprv. existing WW sys. $150,000.

Tex., San Antonio—City Water Dpt., 106 W. Market St., providing water distr. lines in Edgewood Addn. Over $15,000.

Tex., San Antonio—City Water Bd., 106 W. Market St., developing water supply wells 8 St., $15,000; in Concepcion Park, $20,000.

Tex., San Antonio—City Water Bd., 106 W. Market St., water distr. lines, connections. $50,000.

Tex., Temple—A. E. Taylor, mgr., City Hall, water imprvs. $144,007. Applied for FWA funds. Julian Montgomery, Naile Annex, Austin, engr.

Man., Brooklands—Municipality, c/o E. M. Blinco, clk., watermains, Elgin Ave. $20,000.

Man., Portage la Prairie—Municipality, replacing wooden pipelines of WW sys. and laying watermains in streets not serviced. $40,000.

Ont., Ancaster—Ancaster Twp., E. Lyons, clk., watermain extens. $15,000. MacKay & MacKay, 504 Imperial Bldg., Hamilton, engrs.

Ont., Hespeler—Municipality, J. Courtney, mayor, water well. $27,000.

Ont., Oil Springs—Councillor A. Kaufmann, Oil Springs, who has springs on property he owns, is making town an offer to construct reservoir, pump, plant and laying mains, to provide town with water supply for $17,000. Council is now getting legal advice regarding how to finance. J. C. Monteith, Court House, Sarnia, engr. CD 9/12—ENR 9/14.

BIDS ASKED

Bids Asked October 31

New York—Commissioner Water Supply, Gas & Electricity, Municipal Bldg., New York, 7, chlorinator room at Douglaston pump. sta., Alley Pond Park, Queens Boro. Plans deposit $1.

Bids Asked November 14

Ind., Tell City—City Council, N. Beumel, clk., City Hall, 400,000 gal. elevated steel storage tank, 90 ft. high, rein.-con. fdn., valve pit, catch basin, 12 ft. watermain from tower to present supply line. Plans deposit $25. M. L. Burden, Alexandria, consult. engr. CD 9/5—ENR 9/7.

Bids Asked

Ala., Opelika—City, J. W. Whatley, comr., City Hall, water reservoir dam. $25,000. Plans deposit $15. Polglaze & Basenberg, Empire Bldg., Birmingham, engrs.

LOW BIDDERS

Wis., Wisconsin Rapids—Water Works and Lighting Comn., Oct. 16, water supply sys., from Layne-Northwest Co., 709 N. 11 St., Milwaukee, Zone 3, $93,250. CD 9/19—ENR 9/21.

CONTRACTS AWARDED

†Ala., Mobile—City, A. C. Herndon, mayor, City Hall, exten. water distr. sys., Ala. 1-288, to Sullivan, Long & Hagerty, Bessemer, $258,917. **FWA.** Bids 10/12. CD 9/26—ENR 9/28.

Ind., Delphi — City Council, C. McCain, mayor, chn., City Hall, addnl. pump station and underground reservoir, to Weikel Constr. Co., 1150 Fairfield Ave., Fort Wayne, $34,525. Est. $33,499. Plans revised. Awarded 10/16. CD 10/16—ENR 10/19, under LB.

Tex., Houston—City, 12 in. c.i. watermain in Garrow St., to Thos. Bate & Sons, 1107 Girard St., $24,532.

†Va., Williamsburg—City, filtration plant, VA. 44-373, Proposal 1, to V. B. Higgins Co., Greensboro, $162,940; Proposal 2, to Dominion Engineering Co., Hopewell, $56,342. Bids 9/20. CD 9/26—ENR 9/28, under LB.

Wash., Everett—Alderwood Water Dist., Everett, water distr. sys. Meadowvale Sect., south of here, to Argentieri & Colarossi, 1819 Weller St., Seattle, $60,874. Sievers & Ducey, 2508 Colby Ave., engrs.

Ont., Ottawa — Dpt. P. Wks., Ottawa, watermain to serve Rideau Health and Occupational Centre, Smith Rd.-Billings Bridge near here, to McLaughlin Bros., 120 Scott St., $33,000.

Location of ENR Correspondents

Symbols and Abbreviations Include:

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED: (except Streets & Roads); BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Que., St. Cesaire—La Corp. Municipal Village of St. Cesaire, P. Ducharme, sec., laying approx. 13,800 ft. 6 in. c.i. mai constructing 2 reservoirs and pump sta. to Ducharme Bro., St. Cesaire, $16,660. Ruel, 757 Place d'Armes Hill, Montreal, eng

Que., Naudville — Municipality, C. Larouche, clk., Naudville, water sys. to Constr. Co., Ltd., Arvida, $15,681. CD 9/26 ENR 10/5.

SEWERS, WASTE DISPOSAL

PROPOSED WORK

Calif., Sacramento—City, H. G. Denn clk., City Hall, rejected bids trunk sewer in 18 St. and North B serving industrial tract. CD 10/12—ENR 10/ under LB.

Calif., Salinas—City, F. E. Hepler, c City Hall, received no bids Oct. 16 for intercepting outfall sewer line.

Ind., Shelbyville—Sewage disposal pla on city tract. $180,000 or more with equ

La., Opelousas—City, City Hall, sewer collection and disposal sys., exten. sew facilities to all sections city. Barnard Burk, Triad Bldg., Baton Rouge, engrs.

Tex., Harlingen — City, sewage pla imprvs., expan. $30,000. A. Tamm, 107 S. St., engr.

Tex., Palestine—City, defeated $2 bonds, new underground drainage sys. airfield. CD 9/5—ENR 9/7.

Tex., Texas City—City, storm sewers, $ 000. Haile & McClendon, 2807 San Jac St., Houston, engrs.

Wash., Monroe—City, City Hall, sewa disposal plant. $25,000.

Wis., Milwaukee—City, A. H. Hempe clk., rescinded contract sanitary sewer Jackson Park, Est. $40,000. Will probably readvertise in 1945. J. P. Schwada, city eng CD 5/22—ENR 5/25, under CA.

B. C., New Westminster—Municipal sewer and drainage extens. $75,000. Hunter, City Hall, Works supt. and engr.

Man., Portage la Prairie—Municipality laying sewers Queens Ave., 4 and 6 St etc. $60,000.

Ont., Acton—Town, C. F. Leatherland, c installing sewerage sys. About $15,0 Armstrong Wood & Co., 62 Richmond W., Toronto, engrs.

Ont., Lindsay—Town, Chas. Lamb, may sewage disposal plant $90,000; incinerat $30,000. James, Proctor & Redfern, Ltd Excelsior Life Bldg., Toronto, engrs. C 1/21—ENR 1/27.

Ont., Owen Sound—W. G. Case, may Miss G. Ledlard, clk., sewage treatme plant, $300,000, Gore & Storrie, 1130 B St., Toronto, engrs.; incinerator, $75,000.

Ont., Port Hope—Municipality, storm se ers, sanitary sewers and sanitary sew extens. $73,986. G. G. Reid, 7 Edmund Ave Toronto, engr.

Que., St. Ambroise—Municipality, A. Asselin, secy., sewerage sys., northern se municipality. $50,000.

BIDS ASKED

Bids Asked October 31

†Conn., East Hartford—Town, J. A. Mur phy, dir. P. Wks., Town Hall, 740 Main St storm sewers, Meadow and Hartland Sts Conn. 6-233-N. **FWA.** CD 5/29—ENR 6/ under Roads.

Bids Asked In November

Conn., Stratford — Chance Vought Div United Aircraft Corp., 550 Main St., brick concrete incinerator, facilities. Albert Kahn Associated Architects & Engineers, Inc., 90 New Center Bldg., Detroit, Mich., engrs. CD 10/11—ENR 10/19.

Bids Asked November 3

†Va., Denbigh—Warwick County Sch Bd. at office T. Ryland Sanford, supt., sew age lift station, main, sewer, curbing, gutte ing, sidewalks, etc. in connection with Park view School, Jefferson Ave., at Hy. 17, Ta 44-420-N. $23,500. **FWA.** Plans deposit $10 **Massey & Johnson**, Farr Bldg., Fairfax engrs. CD 9/7—ENR 9/14.

Bids Asked November 10

†Md., Baltimore — At City Hall, 2 ft. 18- to 33-in. vitr. clay intercepter sewer Reedbird Ave. from old Annapolis Rd. to point near Seamon Ave., Md. 18-219. $89,5

WERS, etc. (Bids Asked, Cont'd.)
A. Plans deposit $5. N. L. Smith, 312 ...ipal Bldg., ch. engr.

Bids Asked November 14

Calif., Los Angeles — Bd. Supervs. Los ...eles Co., Hall of Records, vitr. clay san... sewers in Motz, Marcelle and Jackson ... Motz St. Sewer Dist., near Hynes, ... 1098. $25,352. A. Jones, Hall of Rec... engr.

Bids Asked November 15

Wis., Green Bay—City, C. Ceriten, clk., ...rm sewers, Contr. Y Clinton St.; Contr. Z ...St., State St. and 10 Sts. Plans deposit $15. ...J. Steeno, city engr.

Bids Asked November 28

Ga., Columbus—City, M. Morton, mgr., ...ty Hall, 2,444 lin. ft. concrete or terra cotta ...wers, 400 lin. ft. 4 in. concrete or tile drain, ...

LOW BIDDERS

†Me., Presque Isle — U. S. Eng., 31 St. ...mes Ave., Boston, Mass., brick, concrete ...cinerator, No. 19-023-45-NEG-44, from T. ... Cunningham, Inc., 15 State St., Bangor, ...,500. CD 10/17—ENR 10/19.

Wash., Seattle—City, County-City Bldg., ...m 4. Oct. 11, sewers in California Ave., ...c. from Matt Malaspina & Co., 1901 23 Ave. ... $41,825. Est. $51,920. CD 10/4.

CONTRACTS AWARDED

†Calif., Mare Island—Yards & Docks, Navy ...pt., 18 St. and Constitution Ave. N.W., ...Wash., 25, D. C., drainage, Naval Training ...Center, NOY 11015, to E. A. Meyer Const. ...Co., Inc., 2259 W. Park Ave., Highland Park, ...25,000.

†Ill., Great Lakes—Yards & Docks, Navy ...pt., 18 St. and Constitution Ave. N.W., ...Wash., 25, D. C., drainage, Naval Training ...Center, NOY 11015, to E. A. Meyer Const. ...Co., Inc., 2259 W. Park Ave., Highland Park, ...25,000.

Newfoundland, St. John's—Government of ...Newfoundland, sewer construction at Naval ...Dockyard, day labor. $25,000. Dpt. P. Wks., ...St. John's, engr.

Que., Noranda—Municipality, sewer exten., ...day labor. $25,000. A. M. Hogg, Town Hall, ...engr.

BRIDGES

PROPOSED WORK

Calif., Long Beach—City, bridges to cross ...Los Angeles River at Long Beach Blvd. ...and at Willow St. $1,000,000. Donald R. ...Warren Co., 500 S. Figueroa St., Los ...Angeles, engr.

Pennsylvania—Commonwealth of Pennsyl...vania, J. U. Shroyer, secy. Hys., Harrisburg, ...grade crossing where Route 641, as relocated ...will cross Pennsylvania R. R. siding, incl. ...grading, drainage, pavement, concrete cross...ing, pavement, retaining wall, guard fence, ...in Ambridge, Beaver Co. $126,500.

Pa., Leetsdale—Commonwealth of Pennsyl...vania, J. U. Shroyer, secy. Hys., Harrisburg, ...altering 3 span, 118 ft. Leet St. bridge over ...Pennsylvania R. R. and State Hy. Route 652. ...$54,644.

BIDS ASKED

Bids Asked October 31

Ohio—State Hy. Dpt., Columbus, 0.051 mi. ...continuous steel beam bridge with concrete ...deck superstructure and modified existing ...piers and abutments over Miami River on ...Sect. Sidney of SH 192, Shelby Co. $58,...990.

LOW BIDDERS

Indiana—State Hy. Comn., Indianapolis, ...Oct. 17, bridges, Contr. 2547 and Contr. ...2546, Henry Co., from Denlston & Garber, ...Rochester, $41,374 and $62,988 respectively, ...est. $48,912 and $83,722 respectively***bridge, ...Contr. 2545, Henry Co., from J. R. Gates, ...3410 Springfield St., Fort Wayne, $40,960, ...est. $51,252***raising 3 span 53 ft. steel ...superstructure bridge, Contr. 2540, from L. ...W. Dailey Co., 1034 Oakland St., $28,028, ...est. $28,991. CD 9/29—ENR 10/5.

Missouri—State Hy. Comn., Jefferson City, ...Oct. 13, two 60 ft., two 70 ft. and two 39 ...ft. I-beam span bridge, Gentry Co., from ...Bushman Const. Co., 1801 S. 8 St., St. Joseph, ...$58,329; one 80 ft., two 70 ft. and one 40 ft. ...I-beam span bridge, Livingston Co., from ...Atkinson-Windle Co., Chillicothe, $75,736. ...CD 10/4

Ore., Portland—Multnomah Co., Court...house, Oct. 17, reconstructing Hawthorne St. ...bridge, from L. H. Hoffman, 715 S. W. ...Columbia St., $303,715. CD 9/26—ENR 9/28.

CONTRACTS AWARDED

Alabama — State Hy. Dpt., Montgomery, ...bridges on Tuscaloosa-Eutaw Rd., Tuscaloosa ...Co., to C. L. Rhodes Co., Decatur, $53,710. ...Bids 10/13. CD 10/5.

Florida—State Rd. Dpt., Tallahassee, 351 ...ft. bridge, Hillsborough Co., to Cone Bros. Contr. Co., Caesar Ave. and Cumberland Rd., Tampa. $43,135. Bids 10/3. CD 9/26, under Streets & Roads.

Minnesota—State Hy. Dpt., St. Paul, imprv. Bridge 6440, S.P. 27-55-03 (Trunk Hy. 100-212), F.A.P. 239-A (1) and Bridge 6446, S.P. 2755-05 (TH 100-212), FAGM 239 B (1), to A. Guthrie & Co., Inc., 424 Endicott Bldg., St. Paul, $311,704 and $57,044 respectively. Bids 10/6. CD 9/20—ENR 9/28.

N. Y., Falconer and Little Valley—Chautauqua Co. Hy. Dpt., 434 N. Work St., Falconer, and Cattaraugus Co. Hy. Dpt., Little Valley, rebuilding two 46 ft. span hy. bridge, county line, own forces. $25,000. W. B. Chilson, 434 N. Work St., Falconer, engr.

STREETS AND ROADS

BIDS ASKED

Bids Asked October 31

Iowa—State Hy. Comn., Ames, maintenance grading Iowa 5, one half mi. east of Cherokee, M-3335, Cherokee Co. F. R. White, ch. engr.

Minnesota—State Hy. Dpt., District Office, Willmar, crushing, screening, loading and hauling about 17,800 cu. yd. gravel, for Maintenance Div., Willmar, Kandiyohi Co. $25,000. O. L. Kipp, ch. engr.

Ohio—State Hy. Dpt., Columbus, grading, draining, asphaltic concrete paving 0.19 mi. Sect. F of SH 331, US 62, Trumbull Co.; removing existing surfacing and asphaltic concrete resurfacing 0.492 mi. Sect. Toledo of SH 51 and 11, US 24, 25 and 23, Lucas Co., $25,600; grading, drainage structures, bituminous surface treatment on waterbound macadam paving 2.891 mi. Sects. Republic H and Y of SH 267, Seneca Co.; 0.882 mi. grading, draining, building drainage structures and old paving with surface treated stablized surface course and erection continuous steel beam bridge on concrete substructure over White Oak Creek on Sect. K of SH 125 Brown Co.; grading, drainage structures and surface treated stablized surface course paving 0.73 mi. and constructing steel beam bridge over West Fork of Honey Creek on Sect. S of SH 196, Clark Co.; 0.18 mi. grading, drainage structures and rein.-con. paving and erecting approach structure at north end of separated crossing with the B & O Railroad consisting of 2 groups continuous concrete slab spans on concrete pile bents and concrete abutments on Sect. Ravenna of SH 74, Portage Co.

Bids Asked November 2

D. C., Wash.—District Comrs., District Bldg., resurfacing play areas at 6 public schools. $17,500.

Bids Asked November 3

Minnesota—State Hy. Dpt., Distr. Maintenance Office, Detroit Lakes, crushing, screening, loading, hauling about 18,000 cu. yd. gravel, Detroit Lakes, Becker Co. $25,000. O. L. Kipp, ch. engr.

Wisconsin—State Hy. Comn., Madison, grading, concrete paving, etc., Black River Falls-Augusta-Eau Claire Rd., Augusta-Fairchild-East County line Rd., FAP. SN-A-FAP 395-E(2). U. S. Hys. 10 and 12. Eau Claire and Jackson Counties.

Bids Asked November 4

Ga., Columbus — City, M. Morton, mgr., City Hall, 18,057 sq. yd. each prime coat, bituminous concrete surfacing and soil cement base street paving, curbs and gutters, etc. Approx. $35,000.

Bids Asked November 6

Minnesota—State Hy. Dpt., Distr. Maintenance Office, Duluth, crushing, screening, loading and hauling about 49,000 cu. yd. for Maintenance Div., Duluth, St. Louis Co. L. O. Kipp, ch. engr.

Bids Asked

†California—Pub. Roads Admin., Phelan Bldg., 720 Market St., San Francisco, received no bids Oct. 17, constructing 5.7 mi. access road to Point Arguello Naval Reservation and Coast Guard Life Boat Station, Santa Barbara Co. Chas. C. Norris, dist. engr. CD 10/9.

Ill., Belleville—City Clerk, City Hall, bids next spring, bituminous concrete paving 0.6404 mi., Proj. 2-CS and 0.7259 mi., Proj. 4-CS. Bids 10/16 not opened. CD 9/26.

Iowa—State Hy., Comn., Ames, received no bids Oct. 17, imprv. 5.5 mi. M-3336, Sioux Co.; rejected bids imprv. 0.25 mi. Cherokee Co.; Proj. M-4319, Harrison Co. CD 10/9—ENR 10/12.

LOW BIDDERS

Calif., Hawthorne — Bd. Supervs. Los Angeles Co., Oct. 17, street imprvs. in Crenshaw Villa, Cash Contr. 540, from T. E. Sherlock, 1103 W. 40 Pl., Los Angeles, $41,417. O. F. Cooley, Hall of Records, Los Angeles, road comr.

Illinois—State Div. Hys., Springfield, Oct. 20, imprv. 2.84 mi. Jefferson Co., from Triangle Constr. Co., 480 N. Evergreen Ave., Kankakee, $55,218. Est. $50,000. CD 10/10—ENR 10/12.

Louisiana—State Dpt. Hys., Baton Rouge, Oct. 18, imprv. 27.1 mi. Vernon Parish, from R. M. Lilly, Louisiana National Bank Bldg., Baton Rouge, $193,697***11.45 mi. Webster Parish, from Glassell General Constr. Co., 1417 Dalzell St., Shreveport, $41,956***0.035 mi. Iberia Parish, from H. M. Young, Jr., Louisiana National Bank Bldg., Baton Rouge, $49,862. CD 10/10—ENR 10/12.

La., Baton Rouge—J. Russel Doiron, et al, East Baton Rouge, Oct. 18, imprv. 60 acres, clearing, grubbing, 15,000 cu. yd. earthwork, 12,000 sq. yd. bituminous roadway paving, sewerage, etc., from Barber Brothers, Reymond Bldg., $46,018. CD 10/11.

Missouri—State Hy. Comn., Jefferson City, Oct. 13, imprv. 1.356 mi. Greene Co., from O'Dell & Riney Const. Co., Hannibal, $43,963; 0.771 mi. Livingston Co., from Atkinson-Windle Co., Chillicothe, $92,650. CD 10/4.

†Oregon—Pub. Roads Admin., New P. O. Bldg., Portland, Oct. 18, constructing Jones Prairie timber access road, Morrow and Umatilla Counties, from Nyberg Constr. Co., Yardley, Wash., $68,900.

†Tex., Temple — U. S. Eng., Fort Sam Houston, Oct. 20, reconstructing roads at McCloskey General Hospital, Ser. No. W-14-154-45-31, from Gilbert Falbo Co., 107 Morales St., San Antonio, $199,981. CD 10/13.

CONTRACTS AWARDED

Alabama—State Hy. Dpt., Montgomery, imprv. 0.785 mi. Tuscaloose Co., to Jhillips Constr. Co., Ashland, $47,825; 1 mi. Bullock Co., to Vandigriff Constr. Co., 4708 N. Court St., Montgomery, $71,031. Bids 10/12. CD 10/5.

Florida—State Rd. Dpt., Tallahassee, imprv. 6.365 mi. Columbia Co., to Marion Contr. Co., Ocala, $101,262. Bids 10/3. CD 9/26.

†Fla., Banana River — Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., paving, Naval Air Station, NOY 10446, to Brinson Constr. Co., Caesar and Cumberland Rds., Tampa, $150,000. CD 8/15—ENR 8/17.

†La., New Orleans—Consolidated Vultee Aircraft Corp., 7020 Franklin Ave., construcing and paving parking lot for 2 sub-assembly plant bldgs., to Gervais F. Favrot, Balter Bldg., $25,959. Defense Plant Corp. will finance. CD 6/14—ENR 6/22.

†Md., Aberdeen Proving Ground—U. S. Eng., Standard Oil Bldg., Baltimore, access roads, Contr W-18-020-eng-674, to H. R. Miller Co., Lancaster, Pa., $50,235.

Minnesota—State Hy. Dpt., St. Paul, 23,150 cu. yd. gravel, crushed, screened, loaded and hauled, Mankato, to Lundin Bros., Mankato, $50,034. Bids 9/29. CD 9/13—ENR 9/21.

Minnesota—State Hy. Dpt., St. Paul, imprv. 4 mi. S.P. 2755-04 (Trunk Hy. 100-212) and S.P. 0210-08 (TH 100-212) and 3.9 mi. S.P. 0210-09 (TH 100-212), S.P. 6239-02 (TH 100-212) and S.P. 6239-04 (TH 100-212), to A. Guthrie & Co., Inc., 424 Endicott Bldg., St. Paul, $219,728 and $147,174 respectively. Bids 10/6. CD 9/20—ENR 9/28.

†N. J., Earle—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., paving, NOY 10932, to Chas. F. Vachris, Inc., 827 Remsen Ave., Brooklyn 12, N. Y., $34,960; asphalt roads, NOY 10931, to Standard Bitulithic Co., 50 Church St., New York, N. Y., $102,931, both at Naval Ammunition Depot.

†Okla., Norman—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., seal coating and patching mat, Naval Air Station, NOY 10949, to General Constr. Corp., 651 Exchange St., Oklahoma City, $90,000.

Okla., Oklahoma City—City, E. Simon, clk., grading, drainage, concrete paving portions N.W. 12, N.W. 13, N.W. 34, S.W. 36, S.W. 45 and S.W. 46 Sts., to Earl W. Baker & Co., Bethany, $81,247, est. $88,000; E. 4 St., to Banta Constr. Co., 1226 N.W. 4 St., $87,011, est. $90,000. Bids 10/10, awarded 10/17. R. Lee, City Hall, engr.

†Tex., Benbrook—U. S. Eng., 231 W. Main St., Denison, concrete pavement and railroad tracks, Aircraft Plant 4, Contr. W-41-242-eng-332, to Texas Bitulithic Co., 111 Commerce Ct., Dallas, $136,123.

Tex., Bryan—A & M College of Texas, College Station, approx. 11,000 sq. yd. concrete sidewalks, to R. B. Butler, Bryan, approx. $25,000.

Tex., Gretna—P. G. Young, engr., Courthouse, Refugio, imprv. 4¾ mi. road, for Humble Pipe Line Co., Corpus Christi, to Day P. McNeel Co., 922 Austin St., San Antonio, approx. $33,280. CD 9/15—ENR 9/21.

STREETS, etc. (Contracts Awarded, Cont'd.)

Utah—State Road Comn., **J. S. Evans**, chn., Salt Lake City, imprv. 0.269 mi. **Salt Lake Co.**, to Young & Smith, 503 Beason Bldg., Salt Lake City, **$24,990.** Est. $20,394. Bids 8/25. CD 8/16.

†Va., Shelton—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., paved muster and drill area, Armed Guard School, NOY 11161, to Ames & Webb, Inc., P. O. Box 4001, Broad Creek Village Station, Norfolk, Zone 2, **$44,450.**

Washington—B. Bantz, dir. Hys., Olympia, imprv. 1.689 mi. Kitsap Co., to Rush-Baird Co., Hoge Bldg., Seattle, Zone 4, **$93,633***** 9.409 mi. Clallam Co. and 6.22 mi. Chelan Co., to Sound Constr. & Engrg. Co., 1403-W. 45 St., Seattle, **$138,932** and **$44,615** respectively***4.553 mi. Lewis Co., to Holmberg & Norman Co., Port Orchard, **$35,745*****stockpiling mineral aggregates for nonskid single seal treatment on State Hys. 2, 2-A, 7 and 10, Douglas, Grant and Okanogan Counties, to L. J. Lavin, Coulee City, **$31,550.** Grand total $344,475. Bids 10/17. CD 10/3—ENR 10/5.

N. B., Moncton—Canadian National Rys., H. A. Dixon, ch. eng. (oper.), 360 McGill St., Montreal, Que., concrete paving continuation John St., to Wheaton Brothers Ltd., 7 Downing St. Est. **$25,000.**

Newfoundland — Bowater Pulp & Paper Mills Ltd., St. John's road construction from Hampden in bottom of White Bay to Purbeck Cove and then across to Pacquet, day labor. **$30,000.**

Ont., Windsor—Ford Motor Co. of Canada, Ltd., 2780 E. Sandwich St., 1,300 sq. yd. concrete roadway construction, day labor. **$25,000.**

Que., Montreal—City, J. A. Mongeau, clk., paving, sidewalks, on projected street No. 163-327, village of Cote des Neiges, from Cote des Neiges Rd. westward, to Chas. Duranceau, Ltd., 5847 Hamilton St., $25,645.

EARTHWORK, WATERWAYS

PROPOSED WORK

†North Carolina and South Carolina—U. S. Eng., 33 Customhouse, Charleston, S. C., rejected bids Oct. 17, maintenance dredging Intracoastal Waterway from Cape Fear River, N. C. to Winyah Bay, S. C., sect. south of Little River, No. 38-081-45-2 Neg. May readvertise. CD 10/10—ENR 10/12, under S. C., Charleston.

†Tex., Cameron—U. S. Eng., 25 St. and Avenue F, Galveston, levee work, incl. 32,000 cu. yd. earth embankment, etc., No. 41-243-45-C29. $25,000.

Tex., Texas City—City, drainage ditches, $50,000 or more. Haile & McClendon, 2807 San Jacinto St., Houston, engrs.

Wash., Aberdeen—Port of Grays Harbor, Aberdeen, dredging channel. $100,000. Funds for 1945 allotted

Wash., Bellingham—Port of Bellingham, Municipal Dock, plans bond election Nov. 7, dredging waterway and filling in port property. $300,000.

B. C., Sirdar—Province of British Columbia, Victoria, irrigating 7,500 acres in Ducks Lake area. **$90,000.** Dpt. Lands, Victoria, engr.

B. C., Wynndel—Province of British Columbia, Victoria, plans irrigation 2,400 acres. $50,000. Dpt. Lands, Victoria, engr.

Sask., Fort a la Corne—La Corne Power Co-op. Development Assn., Fort a la Corne, irrigation scheme, $60,000; hydro plant on North Saskatchewan River, $350,000.

BIDS ASKED

Bids Asked In October

†Ore., Bend—Bureau Reclamation, Bend, canal excav. and structures, Deschutes project north of Crooked River. $200,000.

Bids Asked November 2

†Louisiana—U. S. Eng., U. S. Post Office & Courthouse, Vicksburg, Miss., approx. 209,000 cu. yd. earthworks, east bank of Red River Avoyelles Parish.

Bids Asked November 11

Ind., Gary—Burns Ditch Comn., A. Kelly, supt., City Hall, dredging 7½ mi. Burns Ditch, 150,000 cu. yd. excav. $77,500. Plans deposit $15. H. E. Beine, City Hall, engr.

Bids Asked November 15

†Ore., Klamath Falls—Bureau Reclamation, Klamath Falls, constructing Klamath Falls drain outlet, Modoc unit, Tule Lake Division, requiring 560,000 yd. excav. for drain, 3,000 yd. overhaul, 700 yd. excav. for structures, 520 yd. backfill, 280 yd. concrete in structures, etc. B. E. Hayden, Klamath Falls, engr.

Bids Asked Early Next Year

†Ore., Bend—Bureau Reclamation, Bend, lateral excav. and distr. structures. $200,000.

LOW BIDDERS

†Louisiana—U. S. Eng., foot of Prytania St., New Orleans, Oct. 10, approx. 61,000 cu. yd. uncompacted earthwork on Item L 84 Merit Levee, Lake Borgne Dist., Solic. No. 16-047-45-28, St. Bernard Parish, from T. L. James & Co., Inc., Kenner, 24c. per cu. yd. CD 9/27—ENR 10/5.

†Wash., Everett—U. S. Eng., 800 3 Ave., Seattle, Zone 4, Oct. 16, dredging harbor, from Puget Sound Bridge & Dredging Co., 2929 16 Ave. S.W., Seattle, **$41,280.**

†Alaska, Seward—U. S. Eng., 800 3 Ave., Seattle 4, Wash., Oct. 14, repairing Lowell Creek flood control diversion tunnel, Neg. 1019, from R. J. Sommers, Juneau, **$50,124.** CD 8/28—ENR 8/31.

CONTRACTS AWARDED

Ia., Ackley—Hardin Co., W. O. Guenther, aud., Eldora, 3 mi. drainage ditch, to Lowe Constr. Co., Eldora, **$18,060.** Bids 10/16. R. T. Johnson, Eldora, co. engr.

†Missouri—U. S. Eng., 816 U. S. Courthouse & Customhouse, St. Louis, Zone 2, placing approx. 46,000 cu. yd. earth in repairing levees at various locations St. Charles Co., Neg. No. 23-065-45-37, to J. T. Maloney & Son, 7546 Ethel Ave., Richmond Heights, St. Louis, Zone 17, **$20,778.** Bids 9/29.

†Neb., Hemingford—Bureau Reclamation, Dpt. Interior, Hemingford, constructing Dunlap Diversion Dam, Mirage Flats project, 12 mi. northeast of here, Spec. 1767-D, to M. C. Long, Billings, Mont., **$98,135.** Bids 9/23. CD 9/6—ENR 9/14.

†Tennessee—U. S. Eng., P. O. Box 97, Memphis 1, approx. 15,000 cu. yd. earthwork, furnishing, placing approx. 1,900 cu. yd. rip rap stone paving on spur levee slopes, deflection dike slopes and adjacent aprons, clearing approx. 3½ acres woodland, etc., vicinity Tiptonville, Lake Co., to Markham & Brown, Cape Girardeau, Mo., **$29,125.** Bids 10/13.

N. S., Canning—Marine Dykeland Rehabilitation Comn., Canning, new dyke, to Atlantic Coast Co. Ltd., 163-167 Upper Water St., Halifax, about **$75,000.** A. MacDonald, Canning, engr.

LATIN AMERICA

Argentina, Resistencia—Republic of Argentina, Dpt. P. Wks., Buenos Aires, plans National Cotton Container factory. 500,000 pesos.

Brazil, Rio de Janeiro—Duperial do Brazil, Rio de Janeiro, plans plant for production caustic soda, chlorine, etc. $200,000.

Mexico, Monterrey—Fabrica Productora de Papel, S. A. Monterrey, bids within 90 days, paper factory. $250,000.

Mexico, Monterrey—State of Nuevo Leon, Governor Arturo B. de la Garza, Monterrey, bids within 60 days, civil college group. $200,000. Jaime Garza, head of committee for state.

Mexico, Reinosa—State of Nuevo Leon, Governor Arturo B. de la Garza, Monterrey, Mexico, bids in 60 days, constructing steel bridge over highway on San Juan River, near here. $250,000.

Mexico, Saltillo—International Harvester Co., Mexico City and Saltillo, plans agriculture machinery mfg. plant. $750,000. W. Setzler, c/o owner, engr.

Peru, Lima—Republic of Peru, Lima, plans railway to port of Matarani to facilitate communication with southern zone of the Republic. **$750,000.**

PUBLIC BUILDINGS

PROPOSED WORK

†Ariz., Miami—Pub. Housing Auth., NHA, 785 Market St., San Francisco, 4 unit family trailer, Ariz. 2358.

†Calif., Alameda—Pub. Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, plans by Kent & Hass, 525 Market St., San Francisco, 465 dwelling units, for Navy personnel, Calif. 4895 N. CD 10/5—ENR 10/12.

†Calif., Berkeley—Pub. Housing Auth., NHA, 760 Market St., San Francisco, plans by Miller & Warnecke, Financial Center Bldg., Oakland, 190 dwelling units, Calif. 4901-N.

†Calif., Fallbrook—Pub. Housing Auth., NHA, 785 Market St. San Francisco, plans by Risley, Gould & Reichart, 220 South Westmoreland St., Los Angeles, 32 family dwelling units, Calif. 4899-N. CD 10/4—ENR 10/12.

†Calif., Kelso—Pub. Housing Auth., NHA, 785 Market St., San Francisco, 10-unit family trailer, Calif. 4907.

†Calif., Los Angeles—Pub. Housing Auth., NHA, 760 Market St., San Francisco, plans by Flewelling & Wing, Architects Bldg., 85 temporary family dwe[illegible] units, Calif. 4913N.

†Calif., Oceanside—Pub. Housing Au[illegible] NHA, 785 Market St., San Francisco, [illegible] by Risley, Gould & Reic[illegible] moreland St., Los Angele[illegible] ing units, Calif. 4900-N. CD 10/12.

†Calif., Pleasanton—Pub. Housing Au[illegible] NHA, Phelan Bldg., 760 Market St., San Francisco, plans by W. D. Peugh, 333 Montgomery St., San Francisco, [illegible] family dwelling units, Calif. 4893-N. CD 10/12.

†Calif., Port Chicago—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., architectural engineering services by Miller & Warnecke, 1700 Financial Center Bldg., San Francisco, subsistance bldg. and fire house.

†Calif., Redwood City—Federal Works Agency, 2223 Fulton St., Berkeley, receives bids Oct. 10, nursery school, Calif. 4-650-E. Reynolds & Chamberlain, 564 Market St., San Francisco, archts. CD 10/2.

†Calif., San Diego—San Diego Unified School Dist., San Diego Co., 6 classroom Paradise Hill school and 5 classroom Pacific Beach School, Calif. 4-650-E. $142,[illegible] **FWA.**

†Calif., San Diego—Pub. Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, plans by Giberson & Adams, 122 Los Feliz Rd., Glendale, 100 family dwelling units, Calif. 4902-N; plans by Coronado Housing Architects, 113 E. Los Feliz Rd., Glendale, 250 family dwelling units, Calif. 4902-N. CD 10/9—ENR 10/12.

†Calif., San Diego—Pub. Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, plans by Wilson & Hope, Architects Bldg., Los Angeles, 715 family dwellings, Calif. 4903-N.

†Calif., San Diego—Pub. Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, plans by Flewelling, Wright, Giberson, Architects Bldg., Los Angeles, family dwelling units, Calif. 4914-N.

†Calif., San Diego—Pub. Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, plans by Bodmar, Wurdeman & Becket, 6536 Sunset Blvd., Los Angeles, unit family dwellings, Calif. 4915-N.

†Calif., San Diego—Pub. Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, plans by Bodmar, Wurdeman & Becket, 6536 Sunset Blvd., Los Angeles, family dwelling units, Calif. 4916-N.

†Calif., San Diego—Pub. Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, plans by Bodmar, Wurdeman & Becket, 6536 Sunset Blvd., Los Angeles, family dwelling units, Calif. 4917-N.

†Calif., San Francisco—Pub. Housing Auth., NHA, 760 Market St. S., plans by D. Smith, 58 Sutter St., 50 temporary family dwelling units, Calif. 4911-N.

†Calif., Santa Ana—Pub Housing Auth., NHA, Phelan Bldg., 760 Market St., San Francisco, plans by Marsh, Smith & Powell, 516 Architects Bldg., Los Angeles, 75 temporary family dwelling units, Calif. 4[illegible]

Ill., Chicago — Chicago Housing Auth., 343 S. Dearborn St., 225 unit 2 story war housing and community bldg., Dearborn and 27th Sts. and 275 unit 2 story, brick housing, Wentworth and 39 Sts.

Ind., Rushville—Rush County Cooperative, E. Frazee, mgr., Indiana Third St. and Big Four Railway, soybean plant, extract and process soybeans, enlarge mills. $50,000 or more with equip.

★**Ia., Clarinda**—City, E. J. Johnson, clk. City Hall., $550,000 bond election Nov. 7, municipal light and power plant.

Kan., Kansas City—Bd. Educ., School Dist. 40, 50 Highway and Lamar Sts., $200,000 bond election in November, school, J. W. Radotinsky, Comm. National Bank Bldg., archt.

†Kan., Sunflower Village—Village Council, recreation bldg., incl. moving picture theatre, bowling alleys, etc., Kan. 14-262-F. $135,000. **FWA.**

†Ky., Paducah—City of Paducah and McCracken Co., 1 story, part basmt, health center, Ky. 15-170-F. **$95,357. FWA.**

Me., Lewiston—City, Mayor's Office, City Hall, plans by **A. J. Harriman**, 38 Shepley St., Auburn, administration bldg., incl. steam and incinerator for P. Wks. Dpt., at Closter Field. $250,000. CD 6/27—ENR 6/29.

†Me., Searsport—U. S. Eng., 31 St. James Ave., Boston, Mass., transporting and erecting barracks, No. 19-023-45-Neg-43. $6,[illegible]

†Md., Baltimore—West Baltimore General Hospital, Rayner and Dukeland Aves., plans completed by H. P. Hopkins, 10 E. Mulberry St., 3 story, brick nurses' home and training facilities, Md. 18-207-N. $250,000. **FWA.** CD 10/13—ENR 10/19.

Mich., Lake City—Bd. Supervs. Missaukee Co., Lake City, plans by F. D. Madison, Royal Oak, 3 story, bsmnt., brick, steel, stone, rein.-con. court house. Approx. $200,000.

†Mont., Drummond—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave. and Union St.

LIC BLDGS. (Proposed Work, Cont'd.)
tle, 1, Wash., moving 10 housing units Anaconda and re-assembling with ies here, Wash. 20436.
N. J., Jersey City—U. S. Eng., 120 Wall New York 5, N. Y., industrial storage house. $25,000.
N. Y., Jamaica—Mary Immaculate Hospi- 153-11 89 Ave., plans by Wm. J. Boegel, 5 Ave., New York, Zone 18, and bids nurses' home and training facilities, 10-354. FWA. CD 10/4—ENR 10/12.
N. C., Durham—United States Public ith Service, Federal Security Agency, heda Station, Wash. 14, D. C., shower with sunparlor, boiler house, remodel- 3 bldgs., N. C. 31-308-F. $77,800. FWA.
O., Martins Ferry—Martins Ferry Hospi- Assn., 2 story, bsmnt. hospital addn., O. 245-N. $214,800. FWA.
Rico, Ponce City—City, preparing plans pital. $200,000. C. E. Norton, city clk.
Ore., Klamath Falls—Pub. Housing Auth., A. Skinner Bldg., 5 Ave. and Union St., tle 1, Wash., plans by H. Perrin, Spald- Bldg., Portland, 30 unit housing for ilies of Naval personnel, Ore. 353-3-N, 10/5—ENR 10/12.
Ore., North Bend—Pub. Housing Auth., A. Skinner Bldg., 5 Ave. and Union St., tle 1, Wash., plans by Whitehouse & hr. Railway Exchange Bldg., Portland, unit housing for families of Naval per- nel, Ore. 35304-N.
Ore., Portland—Northwestern Ice & Cold rage Co., S.E. Washington St., addnl. ge bldgs. Approx. $150,000. Defense ns Corp. will finance.
Pa., Brownsville—Park & Tilford Dis- ery, Inc., W. J. Hoseman, res. mgr., 1220 ater St., bids soon distillery, addnl. evap- tors, drum dryers, minor foundation and rtition work, steam, water and power es. $355,000. United Engineers & Con- ructors, Inc., 1402 Arch St., Phila., engrs. efense Plant Corp. will finance.
Pa., Erdenheim (Chestnut Hill, Phila. O.)—Springfield Twp. School Bd., Erden- im, plans by Heacock & Platt, 152 N. 15 , Phila., 2 story brick school, $150,000- 00,000.
Pa., Phila.—Bd. Educ., 21 and Parkway, bids soon brick, concrete school, incl. feteria. $500,000. Office of E. P. Simon, 8 S. Broad St., archts. C. H. Wolf, Otis dg., engr. CD 4/4—ENR 4/6.
Tenn., Clinton—Town, recreation bldg., nn. 40-274. $110,000. FWA.
Tex., Amarillo—Pub. Housing Auth., HA, 1205 Electric Bldg., Fort Worth, ans by E. F. & J. Rittenberry, 1000 Fisk dg., Amarillo, and Consolidated Archi- cts & Engineers, 1010 Fort Worth Na- nal Bank Bldg., Fort Worth, 150 portable elter units, Tex. 41664.
Tex., Midland—U. S. Eng., Fort Sam ouston, housing or storage bldg. housing ype A-7 bombing trainers, $40,000.
Tex., Odessa—United Carbon Black Co., Inc., United Carbon Bldg., Charlestown, Va., and Odessa, No. 1, channel type car- n black plant, $300,000; No. 2, channel type arbon black plant, $300,000, 6 mi. west of re. Defense Plant Corp. will finance.
Tex., Pasadena—Bd. Educ., Pasadena, ans by Hedrick & Lindsley, 818 Southern andard Bldg., Houston, school. $150,000. ding application with FWA.
Tex., Texarkana—Pub. Housing Auth., HA, 1205 Electric Bldg., Seventh and aylor Sts., Fort Worth, plans by M. emmon, 213 Tower Petroleum Bldg., Dal- s, 60 family trailers, Tex. 41665.
Wash., Bellingham—Port of Bellingham, unicipal Dock, plans bond election Nov. 7, ld storage plant for farm products. 00,000. CD 5/15—ENR 5/18.
Wash. Kennewick—School Dist. 17, Ben- n Co., school, Wash. 45-293-N. $291,000. WA. CD 6/12—ENR 6/15.
Wash., Walla Walla—Sisters of Charity, alla Walla, plans by H. E. Crawford, 1324 acs St., 2 story, part bsmnt. nurses home, ash. 45-309-N. $167,000. FWA. CD 10/4 -ENR 10/12.
Alta., Calgary—Canadian Society for the ontrol of Cancer, c/o Dr. W. H. McGuffin, lgary, convalescent hospital. $150,000.
B. C., Oak Bay—Municipality, R. F. andy, clk., Junior High School. $150,000.
N. B., Dalhousie—Town, J. L. Bernard, bed hospital. $176,000.
Ont., Hamilton—Bd. Governors Hamilton General Hospital, W. H. Cooper, chn., amilton, 5 story Mount Hamilton Hospi- l addn. $2,000,000. CD 8/2—ENR 8/10.
Ont., New Toronto—Pub. School Bd., C. arrow, chn., New Toronto, vocational hool. $300,000.
Ont., Ottawa—Wartime Housing Ltd., 55 York St., Toronto, 300 houses. $900,- 00. F. C. Askwith, City Hall, engr.
Ont., Toronto—General Housing, Ltd., c/o lie Folkard, Port Credit, housing pro- ram. $150,000.
Que., Thetford Mines—Province of Quebec, c/o Dpt. of Attorney General, Quebec City, plans by Dpt. P. Wks., Quebec City, courthouse and jail. $150,000.

BIDS ASKED

Bids Asked October 26

†R. I., Quonset Point—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N. W., Wash. 25, D. C., paint and oil storage bldg. addn., bit. concrete surfacing bit. macadam base, NOY 10954. CD 9/20.

Bids Asked October 31

D. C., Wash.—Bd. Educ., District Bldg., school, 44 and H Sts. $150,000. Plans deposit $20.

†Md., Baltimore—Palmer & Lamdin, archts., 1020 St. Paul St., 3 story, bsmnt., 16x94 ft., nurses' home addn., Md. 18-224-N, for South Baltimore General Hospital. $67,500. FWA. Plans deposit $20. CD 8/18—ENR 8/24.

Bids Asked November 1

Ind., Richmond—Bd. P. Wks., J. R. Britten, mayor, chn., City Hall, municipal light and power plant imprvs., cooling towers, structural steel, concrete. $65,000-$85,000. Plans deposit $10.

†Alaska, Ketchikan—Sisters of St. Joseph, Ketchikan, 3 story, concrete utility bldg. at Ketchikan General Hospital. $45,000. FWA. H. B. Foss, Juneau, archt.

Bids Asked November 2

N. Y., Ossining—Dpt. Correction, Albany, altering Prison Bldg. 8. Plans deposit $5.

Bids Asked November 7

†Md., Havre de Grace—Federal Works Agency, 601 State-Planters Bank Bldg., Richmond, 19, Va., 1 story, school, addns., alterations, Concord Fields, Md. 18-218. $27,300. FWA. Plans deposit $5. CD 8/30—ENR 9/7.

Bids Asked November 9

†Maryland—Federal Works Agency, 601 State-Planters Bank Bldg., Richmond 19, Va., dismantling 3 demountable dormitories on site of Federal housing at Dublin Va., and transporting same to Baltimore Co., Md., reconstructing them on new founds., for child care facilities, Dundalk and Sollers Point, Md. 18-227 and Md. 18-228, $38,200 and $37,000 respectively. FWA. Plans deposit $5. Francis J. Thuman, 11 E. Lexington St., Baltimore, archt.

Bids Asked About November 15

†Calif., Oakland—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., bldgs. for dependents, female service personnel and addnl. bldgs., Naval Hospital, Spec. 15425, NOY 11077.

Bids Asked December 5

★†Ala., Tuscaloosa—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., 25, D. C., 3 bldgs., connecting corridors, roads, walks, etc. $844,000. CD 1/28—ENR 2/3.

Bids Asked

†Ala., Birmingham—Highland Ave. Baptist Hospital, 2236 Highland Ave., E. W. Saucier, pres., nurses' home and training school, Ala. 1-285-F. $220,900. FWA. Plans deposit $25. Chas. H. McCauley, Jackson Bldg., archt. CD 9/28—ENR 10/5.

LOW BIDDERS

★†Calif., Los Angeles—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., 25, D. C., Oct. 17, addnl. bldgs., utilities, Proj. 2265, from Robert E. McKee, Inc., 4700 San Fernando Rd. W., $1,675,000. CD 8/28—ENR 8/31.

Ill., Springfield—J. W. Kapp, Jr., mayor, City Hall, Oct. 17, installing steam generator unit capable of generating 200,000 lbs. steam per hour at Lakeside Plant, 5 mi. south of here, from Springfield Boiler Co., 1901 E. Capitol St., $393,200. Est. $432,000. CD 9/27—ENR 10/5.

†N. Y., Mitchel Field (br. Hempstead)—U. S. Eng., 120 Wall St., New York, Zone 5, Oct. 20, alterations, addns. Post Hospital, from Roberts Nash Constr. Corp., 39-15 Main St., Flushing, $153,000. CD 10/17.

†Pa., Scott Twp.—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., Oct. 17, site imprvs., housing, Pa. 36212, from G. J. Packey Co., 110 Beechwood Ave., Mt. Vernon, N. Y., $59,400.

CONTRACTS AWARDED

†Ala., Anniston—U. S. Eng., Grant St. west of Westwood St., Mobile, reconstructing warehouse, Anniston Ordnance Depot, Contr. W-01-076-eng-791, to Williams Constr. Co., Fort Benning, Ga., $73,020.

†Ala., Sylacauga—U. S. Eng., Grant St. west of Westwood St., Mobile, plant addn., exten. to TNT lines, to E. I. duPont de Nemours & Co., Inc., R. A. Fuller, mgr., Sylacauga. Est. $400,000.

†Calif., Needles—Pub. Housing Auth., NHA, 760 Market St., San Francisco, site development and moving 95 trailer units, Calif. 4869, to Lewis W. Hunt Co., 854 S. Robertson Blvd., Los Angeles, $57,100. Bids 8/10, awarded 20/17. J. Dewey Harnish, 212 E. B St., Ontario, and Marsh, Smith & Powell, 816 W. 5 St., Los Angeles, archts.

†Fla., Jacksonville—Bd. Public Instruction, Duval Co., 4 classroom and multi-purpose room Riverview School, F. S. Cates, Graham Bldg., archt.; 5 classroom Thos. Jefferson High School, Marietta, J. D. Powell, Atlantic National Bank Bldg., Jacksonville, archt.; 6 classroom Wesconett School, Jacksonville Heights, R. Seymore, 122 Hogan St., Jacksonville, archt.; 8 classroom Fletcher Junior High School, Jacksonville Beach, L. Sheftall, Clark Bldg., archt.; and 6 classroom North Shore Junior High School, F. S. Cates, Graham Bldg., archt., to Arnold Constr. Co., Palm Beach, $224,777. Awarded 10/14. FWA. CD 9/19—ENR 9/21.

†Fla., Jacksonville—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N. W., Wash. 25, D. C., exten. access and overhaul shop, ordnance shop and addn. to maintenance bldg., NOY 10566, to Paul Smith Constr. Co., 310 N. Rome Ave., Tampa, $191,740.

†Ga., Warner Robins—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, erecting elevated water tanks, Ga. 9170, to A. L. Henderson, P. O. Box 476, Charlotte, 2, N. C., $38,314. J. N. Pease & Co., Inc., Johnston Bldg., Charlotte, N. C., engrs. CD 10/3—ENR 10/5.

†Ill., Rock Island—U. S. Eng., Rock Island, altering bldg., Rock Island Ordnance Center, Contr. W-11-117-eng-486, to T. S. Willis, Janesville, Wis., $61,845.

†Ill., Rock Island—U. S. Eng., Clock Tower, Rock Island, brick service bldg., heating plant, magazine and observation bldgs., etc., to William E. O'Neil Co., 2751 Clybourn St., Chicago, $69,000.

†Mich., Detroit—Bd. Educ. 1354 Broadway Ave., general contract brick, steel, rein.-con. Higginbotham School addn., Mich. 20-301-N, to Emil Van Sile Co., 3443 Canfield Ave., est. $181,300, N. C. Sorensen, 2200 Industrial Bank Bldg., archt.; Marion Law School addn., Mich. 20-36-N, to A. W. Kutsche & Co., 2111 Woodward Ave., est. $188,500, J. Ivan Dise, 2631 Woodward Ave., archt. FWA. CD 8/24—ENR 8/31.

†N. Y., Brooklyn—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N. W., Wash. 25, D. C., temporary bldg., Armed Guard Center, NOY 9706, to Caye Constr. Co., Inc., 356 Fulton St., Zone 1, $80,300. CD 9/25.

★Pa., Norristown—Dpt. Welfare, c/o Dpt. Property & Supplies, Capitol Bldg., Harrisburg, general contract Ward Bldg. 51, for Male Disturbed patients, State Hospital, to Wark & Co., 1700 Sansom St., Phila., $719,670***electrical work, to Electro Constr. Co., 358 Broad St., Phila., $39,960***plumbing and drainage, to R. T. Frye & Co., Inc., 623 10 Ave., New York, N. Y., $76,767*** heating, to W. M. Anderson Co., 600 Schuylkill Ave., Phila., $77,950. Grand total $334,347. Bids 10/4, awarded 10/14. CD 10/6—ENR 10/12, under LB.

†Tex., Benbrook—U. S. Eng., 231 W. Main St., Denison, airplane parts plant unit, to Willis & Sanquinet, Flatiron Bldg., Fort Worth, $40,000.

†Tex., Laredo—U. S. Eng., Fort Sam Houston, supplemental contract for constr. preventive maintenance bldg., to Lee Christy, 503 American Hospital and Life Insurance Bldg., San Antonio, $57,379. CD 6/20—ENR 6/22.

†Va., Norfolk—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., waterproofing bldgs., at Naval Operations Base, NOY 10853, to A. C. Horn Corp., 43-44 10 St., Long Island City 1, N. Y., $71,971.

†Va., Portsmouth—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., installing boilers, appurtenaces, and power plant imprvs., Norfolk Navy Yard, NOY 10169, to Champion Constr. & Engrg. Co., Inc., 10-55-50 Ave., Long Island City, N. Y., $157,480.

★†Wash., Tacoma—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., Naval Advance Base depot bldgs., Advance Base Depot, NOY 11183, to Macdonald Building Co. and Woodworth & Co., 1517 S. Tacoma Way, over $1,000,000. Former contract NOY 9981 rescinded. CD 8/10—ENR 8/17, under CA.

Ont., Toronto—Province of Ontario, c/o Dpt. Labour, soldier rehabilitation and Ontario Apprenticeship system centre incl. remodeling existing bldgs., extens., to G. T. Parmenter & Co., 1465 Yonge St. Est. $150,000. Dpt. P. Wks., Toronto, engr.

COMMERCIAL BUILDINGS

PROPOSED WORK

D. C., Wash.—Mt. Sinai Hospital, 1714 Rhode Island Ave. N.W., plans by DeYoung, Moscowitz & Rosenberg, 205 E. 42 St., New York 17, N. Y., hospital bldg.

N. J., Atlantic City—Knickerbocker Hotel, Tennessee Ave. and Boardwalk, altering hotel and store bldg. $200,000.

Pa., Phila.—Blum Store, 1300 Chestnut St., plans by S. Kaplan, 1220 Spruce St., store addn. $150,000.

COMMERCIAL BLDGS. (Proposed Work, Cont'd.)

Pa., Phila.—University of Pennsylvania, T. S. Gates, pres., 34 and Woodland Sts., plans by P. P. Cret, 1518 Walnut St., library. $200,000. Moody & Hutchinson, 1500 Walnut St., engrs.

Va., Arlington—Arlington M. E. Church, Arlington, plans completed by Wenner & Fink, Wesley Bldg., Phila., Pa., and bids soon brick colonial church and Sunday School bldg. $150,000.

N. B., Milltown—Canadian Cottons, Ltd., Milltown, housing scheme, just outside town, bounded by Spring and Pleasant Sts. $200,000.

Ont., Peterboro—Sisters of St. Joseph, J. R. Corkery, chn., 52 bed hospital addn., St. Joseph Hospital. $250,000.

★**Ont., Peterboro**—Special Hospital Com., A. Sands, alderman, 484 Gilmour St., 225 bed Nichols Hospital, $335,000; cold storage and stock, tunnels, nurses' residence, $240,000; roads, walks, etc., $20,000, etc. Total est. $1,400,000.

Ont., Port Arthur—St. Joseph's Co-op. Bldg. Assn., c/o City Clerk, Port Arthur, 100 dwellings, $350,000; central heating plant, $40,000; park and playground and indoor swimming pool, $50,000.

Ont., Toronto—A. C. Jennings, 92 W. Adelaide St., housing in North York Twp., Glen Park area. $150,000.

Que., Dolbeau—Roman Catholic Parish of Dolbeau, plans by architect, c/o Rev. J. B. Simard, Dolbeau, church and presbytery. $150,000.

Que., Sherbrooke—Roman Catholic Parish of Ste. Famille, 260 W. King St., church. $150,000.

BIDS ASKED

Bids Asked About November 1

Ind., Evansville — Protestant-Deaconess Hospital, A. G. Hahn, bus. dir., 600 Mary St., 5 story, 45x80 ft., and 1 story, 25x106 ft., brick, stone, rein.-con., structural steel hospital wing, office and boiler house. $210,000. Schmidt, Garden & Erikson, 104 S. Dearborn St., Chicago, Ill., archts. CD 5/15—ENR 5/25.

Bids Asked November 6

La., Istrouma (br. Baton Rouge)—Rectory of Redemptorist Fathers, 2233 Farrer St., Baton Rouge, masonry, pressed brick, cast stone, St. Gerard Majella Chapel Plank Rd., Dibolis-Kessels & Associates, Baronne Bldg., New Orleans, archts.

LOW BIDDERS

Va., Portsmouth—Portsmouth Hotel Corp., c/o Rudolph, Cooke & Van Leeuwen, archts., Arcade Bldg., Norfolk, Oct. 12, 7 story, bsmnt., 79x115 ft. hotel, from John A. Johnson Contracting Co., 270-41 St., New York, N. Y., **$383,917.** CD 10/4—ENR 10/12.

CONTRACTS AWARDED

Calif., Venice—N. Bershon, 6633 W. Manchester St., Inglewood, 89 frame, plaster 6 room dwellings, Stewart and Woodlawn Aves., to Bershom Realty Co., P. O. Box 67, Mar Vista. **$340,000.** CD 7/6—ENR 7/13.

Pa., Beaver Falls—Providence Hospital, V. R. Ray, pres., Beaver Falls, general contract 4 story, ground floor, brick, tile block, stone, concrete slab hospital addn., to Cook Anderson Co., 5 and Insurance Sts. Total est. **$200,000.** Carlisle & Sharrer, 507 Martin Bldg., NS Pittsburgh, archts.

★**Va., Norfolk**—Admiral Hotel Corp., H. Dickson, pres., Atlanta, Ga., c/o contractor, 14 story, 364 rooms, granite, limestone, brick hotel, air conditioned, to Muhleman & Kayhoe, Inc., 505 East Franklin St., Richmond. Est. **$2,300,000.**

Wash., Yakima—Sisters of Providence, Yakima, rein.-con. addn. St. Elizabeth's Hospital, to Howard S. Wright & Co., 407 Yale Ave. N., Seattle. Est. **$350,000.** J. W. Maloney, Larson Bldg., archt. CD 10/6—ENR 10/12.

INDUSTRIAL BUILDINGS

PROPOSED WORK

Colo., Denver — AUTOMOBILE PARTS BLDG.—Ford Motor Co., 300 Schaefer St., Dearborn, Mich., plans by Giffels & Vallet, Marquette Bldg., Detroit, Mich., 1 story, 200x420 ft., structural steel frame automobile parts bldg. Over $300,000. CD 10/12—ENR 10/19.

Conn., New London—DAIRY—New London & Mohegan Dairies, Inc., 73 Jefferson Ave., soon lets contract 1 story, 75x90 ft., brick, concrete dairy addn. $55,000. Payne & Keefe, 231 State St., archt. CD 10/3—ENR 10/5.

Ind., Fort Wayne—PLANT—Wayne County Operative Milk Producers, Inc., K. L. Slickler, mgr., 340 E. Berry St., plans by A. M. Straus, 415 Cal-Wayne Bldg., 1 story, milk plant, on 2 acre site, white glazed tile, rein.-con., steel. U. S. Road 27 and State Rd. 1, $130,000.

Ind., Terre Haute—PLANT—Stran-Steel Div. of Great Lakes Steel Corp., 1130 Penobscot Bldg., Detroit, Mich., reconditioning all bldgs. and installing new equip. $400,000 or more with equip.

Mich., Detroit—PLANT—United States Rubber Co., 6600 E. Jefferson Ave., plans by Lockwood Greene Engrg. Inc., 10 Rockefeller Plaza, New York 20, N. Y., mfg. plant addns. CD 9/15—ENR 9/21.

Mo, St. Louis—FACTORY—Valley Furniture Co., 3326 N. 21 St., Zone 7, plans by Froese & Maack, 705 Olive St., Zone 1, furniture factory addns., imprvs. $40,000 plus with equip.

O., Springfield—FACTORY—D. & A. Box Co., plans by L. J. Zeller, 2 W. Columbia St., 1 story, 50x150 ft. brick, steel factory. $40,000.

O., Warren—PLANT—Thomas Steel Co., Warren, altering cold rolled steel plant. $133,000.

Ore., Portland—PLANT—Dairy Cooperative Assn., 1313 S.E. 12 St., plans by Claussen & Claussen, Guardian Bldg., 2 story, bsmnt. whole-milk powder processing plant, rein.-con., E. 6 and Tigard Sts. $150,000.

Ore., Salem—PLANT—Dairy Cooperative Assn., 1313 S.E. 12 St., Portland, plans by Claussen & Claussen, Guardian Bldg., Portland, 2 story, bsmnt. market milk and receiving plant. $90,000.

Ore., Swisshome—SAWMILL—Consumer's Cooperative Assn., North Kansas City, Mo., sawmill. $110,000.

R. I., Cumberland—MILL—Sidney Blumenthal & Co., Inc., Meeting St., plans completed brick, concrete mill addn. Over $40,000.

Tex., Alamo — PLANT — Alamo Products Co., Alamo, 1 and 2 story, rein.-con., frame, sheet metal processing plant. $60,000.

Tex., Brownsville—PROCESSING PLANT—Border Products Corp., Rio-Texas Products Co., 315 E. R. R. St., Weslaco, 2 story, brick, rein.-con. processing plant. $45,000.

Tex., Carthage—PLANT—Lone Star Gas Co., 1915 Wood St., Dallas, and R. Lacy, Longview, dismantling recycling plant at Willow Springs and reconstructing same, near here. $125,000.

Tex., Dallas—FACTORY—Vulcan Bearing Service, 2801 Commerce St., plans by Consolidated Architects & Engineers, 1010 Fort Worth National Bldg., Fort Worth, 1 story, 100x125 ft., brick, concrete factory. $50,000.

Tex., Giddings — WAREHOUSE, etc. — Fairmont Creamery Co., Giddings, soon lets contract 100x125 ft. creamery warehouse and grain elevator, brick, hollow tile. $45,000.

Tex., Houston—WAREHOUSE—S. Myers, Inc., 600 Lockwood Dr., plans by Finger & Rustay, Natl. Standard Bldg., 125x200 ft., rein.-con. masonry warehouse. $50,000.

Tex., Houston—PLANT—Southern Warehouse Corp., 4410 Clinton St., plans by Finger & Rustay, Natl. Standard Bldg., rice drying plant. Over $40,000.

Tex., Houston—FACTORY, etc.—Southwest Wheel, Inc., 800 S. Lamar St., 1 and 2 story factory and warehouse. $125,000.

Tex., San Antonio—SHOP, etc.—Central Vulcanizing Co., 103 W. Martin St., soon lets contract shop and storage bldg. $40,000. Weidner & Co., 317 Frost Bldg., archts. CD 10/23.

Tex., San Antonio — FACTORY — Martin Fluorescent Mfg. Co., 312 Fredericksburg Rd., rein.-con., clay tile, etc., factory, Fulton Ave. and Southern Pacific Ry. tracks. $40,000.

Tex., San Antonio—LUMBER YARD—T. C. Spencer, Jr., 203 Fredericksburg Rd., lumber yard and supplies, storage bldg., facilities. $40,000.

Tex., San Antonio—STUDIO, etc.—Studer Photo Co., 402 San Pedro St., studio and storage bldg., Jackson St. $50,000. Site purchased.

Tex., Waco — SMELTING FURNACE — Owens Illinois Glass Co., Waco, glass smelting furnace. $587,308.

Wash., Tacoma — WAREHOUSE — West Coast Grocery Co., C. H. Hyde, pres., 1732 Pacific Ave., 2 story, 200x700 ft., warehouse, E. D and E. 15 Sts. $250,000.

Alta., Lloydminster—PLANT—Lloydminster Refineries, Ltd., Lloydminster, 1,200 bbl. daily cap. rehydrating unit plant addn., bulk storage warehouse, etc. $100,000.

B. C., New Westminster—SAW MILL—Pacific Sash & Door Co., Ltd., 35 6 St. sawmill, shingle mill, etc.

B. C., Prince George—FACTORY—British Columbia Veneer, Ltd., Nelson, factory. $40,000.

B. C., Vancouver—PLANT—Textile Crafts Ltd., 422 Pacific Bldg., textile plant. $50,000.

N. B., Milltown—PLANT—Canadian Cottons, Ltd., Milltown, textile plant extens. $40,000.

N. B., St. Stephens—FACTORY—Fyron Ceramics Ltd., St. Stephen, reconstructing factory of Canada Foundry & Forging of Ontario, and constructing addn. to same.

Ont., Brockville—PLANT—W. Dool Brockville Creamery & Storage Co., 24 William St., reconstructing cold storage plant. $45,000.

Ont., Cannington — PLANT — Cannington Cereal Industries, Ltd., Cannington, plant exten.

Ont., Exeter—PLANT—[illegible]eter District Co-Operative, Inc., c/o T. P[illegible]assmore, Exeter, cereal, etc. processing pla[illegible] $40,000.

Ont., Hamilton—ICE [illegible]USE—Abec-Fa[illegible] Ice Co., P. Thomson, m[illegible] Barton St. E[illegible] near Sandford Ave., 34[illegible] ft. ice hou[illegible] $44,600.

Ont., Mimico—PLANT—[illegible]anchester Pap[illegible] Boxes, Ltd., 372 Richmo[illegible] St. W., Toronto[illegible] 2 story paper box plant, [illegible]teel, brick, co[illegible] crete, incl. boiler room, [illegible]c., Church an[illegible] Manchester Sts. $75,000-$[illegible]00,000.

Ont., Parkhill—PLANT—[illegible] Parkhill Distric[illegible] Co-operative, Inc., Parkhill, cereal, fru[illegible] vegetable, etc. processing plant. $40,000.

Ont., Porcupine — MINING DEVELOPMENT—Goldhawk Porcupine Mines Ltd[illegible] Porcupine, mining development, incl. shaf[illegible] necessary bldgs. $300,000. James & Buffa[illegible] 1107 Montreal Trust Bldg., Toronto, engrs.

Ont., Rannock—GRAIN ELEVATOR—Ra[illegible]nock Grain & Coal, Ltd., R. R. 6, St. Mary[illegible] grain elevator and chopping mill. $40,000.

Ont., Toronto—PLANT—Frank D. Crowe & Co. Ltd., c/o H. W. Alles, 302 Bay St., mfg. repairing motors, machinery plant, etc. $40,000.

Ont., Windsor — PLANT — Banner Meat Products Ltd., c/o J. E. McKeon, Windsor, mfg. plant.

Ont., Woodstock—COLD STORAGE PLANT—Oxford Farmers Co-Operative & Produce Ltd., Woodstock, cold storage and processing plant. About $60,000. E. H. Darling, 36 James St. S., Hamilton, engr.

Que., Amqui — FACTORY — L. Leveque Ltd., Amqui, factory. $40,000.

Que., St. Hyacinthe—FACTORY—Canadian U. S. Knitting, Ltd., 990 Morrison St., plans by S. Comber, 1502 Ste. Catherine St. W., Montreal, factory addn. $50,000.

Que., St. Pie de Bagot—PLANT—Hume Dufresne, St. Pie de Bagot, wallboard mfg. plant addn. $40,000.

Que., St. Stanislaus—SAW MILL—Bruno Cossette, St. Stanislaus, sawmill, etc., incl. equip. $40,000.

Sask., Regina — GARAGE, etc. — Regina Chevrolet Sales, Ltd., 7 Cornwall St., garage and repair shop. $125,000.

BIDS ASKED

N. H., Exeter—WAREHOUSE, etc.—Railway Express Agency, Inc., 150 Causeway, Boston, Mass., warehouse and office bldg.

★**Tex., Carthage**—RECYCLING PLANT—Rogers Lacy, Longview, dismantling recycling plant at Willow Springs and reconstructing for new plant, in vicinity of here. $500,000.

CONTRACTS AWARDED

Ala., Birmingham—PLANT—Birmingham Seafood Co., 1301-4 Ave. N., seafood processing plant, to J. F. Holley Constr. Co., 816 6 Ave. N., **$40,000.** Menefee & Elliott, Steiner bldg., archts. Bids 10/11.

Conn., Fairfield—TRUCK TERMINAL—Associated Transport, Inc., New Post Rd., brick, steel freight facilities garage, truck terminal, to A. Barbaresi & Son, Inc., Southbury. Est. **$40,000.** A. J. Carson, 325 Memorial Ave., West Springfield, archt. CD 9/26—ENR 9/28

Conn., Hamden (br. New Haven)—FACTORY—High Standard Mfg. Co., 1337 Dixwell Ave., 2 story, 65x170 ft., brick factory, Dixwell Ave., to Dwight Building Co., 152 Temple St., New Haven. Est. $55,000. D. Orr, 96 Grove St., New Haven, archt.

Conn., Middletown — ABATTOIR — East Haven Packing Co., Inc., River St., 2½ story, 35x100 ft., brick, steel, concrete abattoir. Owner builds. **$40,000.** Wm. T. Towner, 164 Court St., archt. CD 9/20—ENR 9/28

Ill., Bellwood—FACTORY—Jefferson Electric Co., 1 story, 40x300 ft., brick, concrete factory addn., to Robert G. Regan Co., 120 N. La Salle St., Chicago. Olsen & Urban, 75 E. Wacker Dr., Chicago, archts.

Ill., Chicago — FACTORY — Chrome-Rite Co., 4532 W. North Ave., masonry contract 1 story, 56x167 ft., brick factory addn., to J. Skorepa, 3526 Wesley Ave., Berwyn. Est. **$49,965.** V. L. Oharn, 4744 W. Rice St., archt.

Ill., Chicago—FACTORY—Clearing Industrial Dist., 6455 S. Central Ave., 1 story, 100x225 ft., brick factory, 4705 Montrose Ave. Owner builds. About **$100,000.** Mead Specialties Co., 15 S. Market St., lessee.

Md., Baltimore—PLANT—Tomke Aluminum Co., 4201 E. Monument St., 1 story, 80x260 ft., steel and masonry plant and office, to Davis Constr. Co., 9 West Chase St., approx. **$50,000.** Kubitz & Konig, Emerson Tower, engrs. and archts. CD 8/31—ENR 8/24.

★**Mass., Chelsea** — FACTORY — Panther Panco Rubber Co., Inc., 31 Highland St., steel for 1 and 3 story, 150x680 ft. factory, to Bethlehem Fabricators, Inc., 44 School St., Boston; fences-barricades, to Harry Blaney Constr. Co., 25 Huntington Ave., Boston. Total est. **$615,000.** CD 10/8—ENR 10/12.

Mass., Lynn—FACTORY—General Electric Co., 920 Western Ave., brick factory Bldg. 29E, to Turner Constr. Co., 38 Newbury St., Boston. Est. over **$40,000.**

DUSTRIAL BLDGS. (Contracts Awarded, Cont'd.)

Mass., Watertown—FACTORY—Insulating ...ricators of New England, Inc., 22 Elkins ... South Boston, 2 story, brick, steel fac... to Temple & Crane, Inc., 80 Federal ... Boston. Est. over **$40,000.** M. Linen... 16 Lincoln St., Boston, engr.

Mich., Bay City—PLANT—Bay City Shov... Inc., Bay City, 60x220 ft. assembly bldg., ... addns., to Austin Co., 429 Curtis Bldg., ...roit, **$165,000.**

N. J., Bayonne—REEL SHOP—General Ca... Corp., foot of W 1 St., 1 story, 75x160 ft., ...k, steel reel shop, to Basco Service Corp., ...lector St., New York, N. Y., **$120,000.**

N. J., Belleville—FACTORY—Westing... ...se Elec. & Mfg. Co., Blvd. of Allies, ...sburgh, Pa., interior alterations, addns. ...story factory, to Frank J. Briscoe Co., ...S. 19 St., Newark, **$85,000.**

N. J., Newark—FACTORY—Hooton Choc... ...te Co., 535-3 St., 2 story factory addn., ...Wininger & Selby, 10 Rockefeller Plaza, ...w York 20, N. Y., **$40,000.** Epple & Kahrs, ...Washington St., archts.

N. J., Sewaren—PLANT—Shell Oil Co., ... West Ave., 1 story, plant addn., to ...mina Bldg. & Const. Co., 14 Georges Rd., ...w Brunswick, **$52,500.**

N. Y., Jamestown—PLANT—Jamestown ...al Equip. Co., Inc., 1088 Allen St., 1 ...y., 109x190 ft., brick, concrete plant ...e, to Warren Constr. Co., 335 Steele St. ...**$60,000.**

O., Cleveland — FACTORY — Forest City ...ndry Co., R. Strangword, vice pres., 2500 ... 27 St., factory alterations, to Sam W. ...erson Co., 1836 Euclid Ave. Est. **$80,690.**

Tex., Alamo — PLANT — Alamo Products ... 102 E. 12 St., remodeling brick, rein.-... sheet metal processing plant, day labor. ...000. CD 10/18.

Tex., Bishop—BUTADIENE PLANT—...Celanese Corp. of America, Bishop, Tex., ...150 Madison Ave., New York, N. Y., de... and construction butadiene chemical ...nt, to Gasoline Plant Constr. Corp., 2nd ...tional Bank Bldg., Houston. **$2,750,000.** ...10/13—ENR 10/19.

Tex., Fort Worth—FACTORY—L. Hicks, ...3 Stadium St., 1 story, 60x175 ft., brick, ...low tile factory, to E. P. Hicks, 3203 ...dium St., **$40,000.**

Tex., Fort Worth—PLANT—Hobbs Mfg. ...609 N. Main St., 200x300 ft. mfg. plant, ...E. B. Snead, Box 777, Austin. **$50,000.** ...arded 10/19. CD 9/13—ENR 9/21.

Tex., McAllen—PLANT—South Texas Pro... ...te Co., 1901 Beech St., 1 and 2 story citrus ...king plant unit, brick, rein.-con., to ...E. Crawford Constr. Co., 205 N. 16 St., ...prox. **$40,000.** CD 10/13—ENR 10/19.

Tex., Mercedes—PROCESSING PLANT—...ams-Heaner Co., Mercedes, 1 and 2 story, ...rus and vegetable processing plant, brick, ...crete, force account. **$45,000.** CD 10/12—...R 10/19.

Tex., Mercedes—PACKING PLANT—Mer... ...es Citrus Growers, 229 N. Ohio St., 2 ...y, hollow tile, concrete packing plant, ...H. B. Swedlund & Sons, Rio Hondo Hy., ...rlingen, approx. **$42,000.** CD 10/13—ENR ...19.

Tex., Mission—PLANT—Barrett & Mc... ...de, Mission, 1 and 2 story citrus pack... plant, brick, rein.-con., sheet metal, day ...or. **$40,000.** CD 10/18.

Tex., Mission—PACKING PLANT—Melch ...Co., Mission, 2 story, citrus packing plant, ...k, rein.-con., force account. **$40,000.** ...10/3—ENR 10/5.

Tex., Pharr—FREEZER LOCKER PLANT ...O. Brewer, Pharr, freezer locker plant, ..., force account. **$40,000.** CD 10/4—ENR ...12.

Tex., Raymondville—MILL—Southwestern ...tton Oil Mill, Inc., J. W. McKelvey, S. ...mmerce St., Harlingen, 68x125 ft. cotton ... mill, 46 ft. high, day labor, **$69,000.** ...10/12—ENR 10/19.

Wash., Seattle — GARAGE, etc. — Taylor... ...wards Warehouse & Transfer Co., 1020 ...Ave. S., design and construction 1 story, ...30 ft. garage, and 50x120 ft. distr. bldg., ...l construction, to Austin Co., 16112 ...clid Ave., Cleveland, O. Est. **$42,000.**

Wis., Boyd—FACTORY—August Lotz Co., ...story, 64x109 ft., and 26x60 ft. wing, con... ...te block factory, concrete fdn., to O. & N. ...mber Co., Boyd. Klinger, Hubbard & Gohn, ...S. Barstow St., Eau Claire, engrs., ...chts.

Wis., Eau Claire—FACTORY—Claire Mont ...at Products, 703 N. Oxford Ave., 1 story, ...3112 ft., brick, structural steel, rein.-con. ...story addn., concrete fdn., to P. Walker ...Son, 2210 Birch St. Klinger, Hubbard & ...hn, 218 S. Barstow St., engrs.-archts.

Wis., Emerald—BOILER ROOM—Forest ...op. Creamery, R. 1, 1 story, 33x48 ft., ...ck, tile boiler room, concrete fdn., 41½x ... ft. high brick chimney, to M. Heiss, Glen... ...od City. Klinger, Hubbard & Gohn, 218 ...Barstow St., Eau Claire, engrs.-archts.

Wis., Manitowoc—GERMINATING HOUSE ...Wisconsin Malting Co., 605 S. 21 St., 2 ...ry, 34x102 ft., brick, rein.-con. germinat... ...house addn., concrete fdn., to Hamann Const. Co., N. 8 and Reed Sts. CD 10/12—ENR 10/19.

B. C., Vancouver—PLANT—Vancouver Ice & Cold Storage Ltd., 303 Railway St., design and construction 1 and part 2 story, 85x240 heavy frame cold storage plant, to Austin Co. Ltd., Dominion Bank Bldg., **$120,000** incl. equip. Awarded 10/6. CD 8/11—ENR 8/17.

Man., Winnipeg — GARAGE, etc. — Nor' West Service Station, Ltd., 130 Lombard St., garage and service station, to Bird Const. Co. Ltd., Confederation Life Bldg., **$45,500.**

★**Ont., Brantford**—PLANT—Massey-Harris Co., Ltd., Market St., 1 story, 150x660 ft. structural steel, brick plant exten., concrete fdn., to A. W. Robertson, Ltd., 57 Bloor St. W., Toronto, about **$600,000.** Allward & Gouinlock, 57 Bloor St. W., Toronto, archts.

Ont., Leaside (Toronto)—PLANT—E. S. and A. Robinson (Canada) Ltd., 53 Laird Dr., two 126 x 229 ft. addnl. stories, 28 x 56 ft. wing addn., rein.-con., steel sash, brick plant, to A. W. Robertson, Ltd., 57 Bloor St. W., Toronto, about **$300,000.** Margison & Babcock, 137 Wellington St. W., Toronto, engr.

Ont., Mimico (Postal Dist. Toronto)—PLANING MILL—Humber Eng. Co., Ltd., 347 Church St., reconstructing planing mill, 70x270 ft. addn., day labor. **$40,000.**

Ont., Port Arthur—PLANT—Thunder Bay Paper Co., Ltd., 408 University Ave., Toronto, 1 story, 32x73 ft., and 1 story, 20x50 ft. plant addns., concrete fdns., day labor. **$40,000.**

Ont., Toronto—BOILER PLANT, etc.—Consumers Gas Co., 19 Toronto St., boiler plant remodeling to Bradford-Hoshal Co., 1170 Yonge St. Est. **$40,000.** C. B. Dolphin, 43 Victoria St., archt.

Que., Granby—PLANT—Verney Mills of Canada, Ltd., 1253 McGill College Ave., Montreal, two 1 and 2 story, 100x210 ft., brick, concrete plant extens., alterations, at former Carl Stolm plant, to R. & B. A. Ryan, Ltd., 1808 William St., Montreal, about **$200,000.** G. L. Wiggs & Co., 660 St. Catherine St. W., Montreal, engr.

Que., Iberville—PLANT—J. E. Benoit, archt., 110 Champlain St., St. Johns, mfg. plant, boiler room, dining room and garage, for D. Lord and F. Breux, Iberville, to Georges, Choquette & Couture, 7 Boutillier St., St. Johns, about **$60,000.** CD 10/3—ENR 10/5.

Que., Montreal—PLANT—Conant Co., Ltd., 3975 St. Ambroise St., remodeling paint mfg. plant, to A. F. Byers Constr. Co., Ltd., 1226 University St. Est. **$40,000.** T. Pringle & Son, Ltd., 485 McGill St., archts.

Que., Montreal—PLANT—Charles E. Frost & Co., Ltd., 3571 St. Antoist St., 3 story, 60x100 ft., brick, rein.-con., plant addn., to Hyde & Miller, Ltd., 1500 Guy St., about **$80,000.** R. E. Bostrom, 660 St. Catherine St. W., archt.

Que., Montreal—PLANT—National Quarries, Ltd., 6301 Park Ave., steel frame plant, day labor. **$45,000.**

UNCLASSIFIED

PROPOSED WORK

Alabama—SERVICE EXTENSIONS, etc.—Pioneer Electric Cooperative, Inc., Greenville, service extens., substation installation and necessary tie line, Butler Co. $60,000.

Arkansas — POWER LINES — Arkansas Power & Light Co., Simmons National Bldg., Pine Bluff. 34 mi. power lines, Hot Spring Co. $27,655.

★**Colorado**—PIPELINE CARRIER—Utah Oil Refining Co., Utah Oil Bldg., Salt Lake City, Utah. 90 mi. 6 in., 6,250 bbl. daily capacity oil pipeline carrier between Rangely and Craig. $943,000.

Colorado — SERVICE EXTENSIONS — Highland Electric Assoc., Holyoke, service extens., and 22 mi. 69 KV line, Phillips Co. $420,000.

Florida—SERVICE EXTENSIONS—Central Florida Electric Cooperative, Inc., Chiefland, service extens., Levy Co. $25,000.

Georgia—SERVICE EXTENSIONS—Little Ocmulgee Electric Membership Coop., Alamo, service extens., Telfair Co. $25,000.

Idaho, Donley—POWER LINE—Long Valley Electric Assn., Donley, 27 mi. power line. $25,000.

Illinois—SERVICE EXTENSIONS—Southern Illinois Electric Coop., Dongala, service extens., Pulaski Co. $50,000.

Iowa — SERVICE EXTENSIONS — Hardin County Rural Elec. Coop., Iowa Falls, service extens., Hardin Co. $60,000.

Ia., Charles City—AIRPORT—City, $70,000 bond election Nov. 7, municipal airport. CD 10/3—ENR 10/5.

Ia., Keokuk — AIRPORT — City, C. L. Mundy, clk., City Hall, voted $100,000 bonds, municipal airport.

Ia., Oskaloosa—AIRPORT—City, $90,000 bond election Nov. 7, municipal airport. CD 9/21—ENR 9/28.

Ia., Onawa—AIRPORT—City, G. Myrland, chn., $50,000 bond election Nov. 7, municipal airport.

Ia., Perry—AIRPORT—City, $40,000 bond election Nov. 7, purchasing site for municipal airport.

Kan., Beloit—AIRPORT—City, H. E. Heidrick, mayor, City Hall, $35,000 bond election Nov. 7, municipal airport.

†**Louisiana** — POORMAN RANGES — U. S. Eng., 300 Bway., Little Rock, Ark., poorman ranges at airfields, Alexandria, Shreveport (Barksdale Field), Serial No. 03-050-45-28. Over $25,000.

Louisiana — RURAL ELECTRIC POWER LINES—Bossier Electric Co-operative Bossier, rural electric power transmission lines, Bossier Parish, $80,000 REA allot.

Louisiana — TRANSMISSION LINES — Concordia Electric Cooperative, Ferriday, rural electric power transmission lines, Concordia Parish, $80,000 REA allot.

Mass., New Bedford—AIRPORT, etc.—E. Anthony & Sons, Inc., 555 Pleasant St., preliminary plans airport and seaplane base. Over $25,000.

Minn., Duluth — AIRPORT — City, C. D. Jeronimus, clk., City Hall, expansion existing airport, $291,000.

North Carolina—AIRPORT—Raleigh-Durham Airport Comn., G. Adams, mayor, Raleigh, and W. F. Carr, mayor, Durham, and Wake and Durham Counties, airport expansion program, incl. bldg., hotel, hangars, runways, etc. $300,000.

★**Ohio** — DISTRIBUTION LINE, etc. — South Central Rural Electric Cooperative, Inc., Lancaster, acquisition 105 mi. distr. line and construction 865 mi. line serving 2,000 members, Fairfield Co. $910,000.

Ohio — SERVICE EXTENSIONS — Inter-County Rural Electric Cooperative, Inc., Hillsboro, service extens., Pike Co. $50,000.

Oklahoma—OIL PIPELINE—Phillips Petroleum Co., Bartlesville, 21 mi. 8 in. welded pipeline from Edmond Field to pumping sta. near Oklahoma City, incl. necessary pump. stations and boosters. $140,000. H. Kelley, 1st Nati. Bldg., Oklahoma City, engr.

Oklahoma—OIL PIPE LINE CARRIER—Standish Pipe Line Co., E. Reno St., Oklahoma City, and Sohio Pipe Line Co., 1st Natl. Bank Bldg., Oklahoma City, 8 in. crude oil pipeline carrier from Edmond Field to Oklahoma City. $100,000.

Oklahoma — SERVICE EXTENSIONS — Northfork Electric Cooperative, Inc., Sayre, service exten., Beckham Co. $85,000.

Oregon—POWER LINE—Central Electric Cooperative, Redmond, 80 mi. power line between Madros and Gateway. $75,000 available. Flora Engineering Co., Cheyenne, Wyo., engrs.

Oklahoma—RURAL ELECTRIC LINES—East Central Oklahoma Electric Co-operative, Okmulgee, exten. rural electric power transmission lines, Okmulgee Co. $147,000. REA allot.

Oklahoma—TRANSMISSION LINES—Cotton Co. Electric Co-operative, Walters, rural electric power transmission lines, Cotton Co. $232,000. REA allot. CD 1/19—ENR 1/27.

Pa., Bridgeport — PLAYGROUND, etc. — Bridgeport Community Fund, Norristown Penn Trust Bldg., Norristown, surveying sites, playground and recreation center. $25,000-$75,000. G. B. Melius, 112 S. Easton Sq., Glenside, engr.

Pa., Johnstown—HANGARS, etc.—Graham Aviation Co., Wm. J. Graham, pres., P. O. Box 577, preparing plans and bids soon 30x100 ft. hangar, and two 30x170 ft. hangars, 1 story, 40x170 ft. administration bldg. $60,000. S. Hudson, P. O. Box 577, co. ch. engr.

Pa., Mifflin Twp.—HANGAR, etc.—Graham Aviation Co., Wm. J. Graham, pres., County Airport, Pittsburgh, preparing plans 1 story administration bldg., 20 individual and 7 transient hangars, 50x100 ft. school ship, at County Airport, Pittsburgh, co. ch. engr.

Tennessee — SERVICES EXTENSIONS — Forked Deer Electric Cooperative, Inc., Halls, service extens., Lauderdale Co. $25,000.

★**Texas and California**—PIPELINE CARRIER—Southern California Gas Co., Pacific Gas & Electric Co., Southern Counties Gas Co., 810 S. Flower St., Los Angeles, Calif., 22 in. natural gas pipeline carrier between Amarillo, Tex., and southern California area, $55,000,000.

Texas—NATURAL GAS LINE—Lone Star Gas Co., 1915 Wood St., Dallas, 16 in. natural gas line between Trinidad and gas fields, near Carthage, Panola Co. $125,000.

Texas — RURAL ELECTRIC POWER TRANSMISSION LINE — Denton County Electric Co-Operative, Denton, 310 mi. rural electric power transmission line, Denton Co. $275,000.

UNCLASSIFIED (Proposed Work, Cont'd.)

Texas—SERVICE EXTENSIONS—Belfalls Electric Cooperative, Inc., Rosebud, service exten., Milam Co. $30,000.

Texas—SERVICE EXTENSIONS—Dewitt Co. Electric Cooperative, Inc., Cuero, service extens., Dewitt Co. $25,000.

Texas—SERVICE EXTENSIONS, etc.—Jasper-Newton Electric-Coop., Inc., Kirbyville, service extens., tie line, Jasper Co. $125,000.

†Tex., Harlingen — GUNNERY RANGES ELECTRIFICATION—U. S. Eng., 25 St. and Avenue F, Galveston, electrification gunnery ranges at Laguna Madre Sub-Base, Ser. 41-243-45-C35, $25,000.

†Tex., Kelly Field (br. San Antonio)—LOOPED NATURAL GAS LINE SYSTEM—U. S. Eng., Fort Sam Houston, looped natural gas line sys. for air depot, incl. over 24,000 lin. ft. 6 in. steel pipe, Ser. W-41-154-45-48.

†Tex., Laredo—AIRPLANE WASH RACK, etc.—U. S. Eng., Fort Sam Houston, large airplane wash rack and facilities, 4,000 sq. yd. 6 in. concrete paving, water and other utilities, etc. $25,000.

Tex., Longview—AIRPORT BLDG., etc.—Gregg Co., c/o M. H. Gibson, judge, Courthouse, airport administration bldg. and control tower. Voelker & Dixon, 913½ Indiana Ave., Wichita Falls, engrs.

Tex., Palestine — AIRPORT IMPROVEMENTS—City, defeated bonds, airport imprvs., incl. filling, leveling, erosion prevention of field, reconstructing taxi strip. $45,000. E. L. Killingsworth, Waco, engr. J. B. Early, city engr. CD 9/7—ENR 9/14.

Tex., San Antonio—LUMBER YARD—Mrs. F. E. Rutledge, 518 W. Market St., lumber yard at 435 W. Cincinnati Ave. $50,000.

Wash., Skykomish—PASSING TRACK, etc.—Great Northern Ry. Co., C. M. Nye, ch. engr., 175 E. 4 St., St. Paul, Minn., exten. passing track and constructing crossover. $56,000.

Wisconsin—SERVICE EXTENSIONS—Lafayette Electric Coop., Darlington, service extens., Lafayette Co. $65,000.

Alberta-Saskatchewan—GAS PIPELINE—Northern Natural Gas Co. Ltd., Vermilion, Alta., gas pipeline from Vermilion, Alta. to Saskatoon, Sask. $200,000.

★**British Columbia**—AIRBASE—Dominion Govt., Ottawa, Ont., plans by Dpt. National Defense for Air, Ottawa, Ont., R.A.F. Transport command base, Vancouver or Victoria. $500,000. Dpt. Transport, Ottawa, Ont., engrs.

B. C., Courtenay—FISH LADDER—Dominion Govt., Ottawa, Ont., fish ladder over dam on Puntledge River. $50,000. Dpt. Fisheries, Ottawa, Ont., engrs.

B. C., Victoria—PARK IMPROVEMENTS—Municipality, Beacon Hill Park imprvs., incl. bandstand, tennis courts, playground, equip. and lookout station, etc. $60,000. E. H. Warren, Parks Bd., Victoria, engr.

B. C., Victoria—PARK DEVELOPMENT—Province of British Columbia, Victoria, plans further development as scenic centre of Tweedmuir Park. $100,000. Dpt. Lands, Victoria, engr.

New Brunswick—POWER LINE EXTENSION—New Brunswick Electric Power Co., Saint John, exten. power lines from Seal Cove to Deep Cove, on Island of Grand Manon, etc. $40,000.

N. B., Campbellton — AIRPORT — Dpt. Transport, Ottawa, Ont., airport. $75,000.

N. B., Saint John — PARK IMPROVEMENTS—Saint John Horticultural Assn., c/o G. E. Chester Gandy, Saint John, Rockwood Park imprvs. incl. protective dam at artificial lake, teahouse, summer houses and shelters, new pavilion and facilities for skating, boating and dancing. $35,000. D. E. Lynch, c/o owner, archt.

N. S., Dartmouth—RACING TRACK—Municipality, ½ mi. harness racing track replete with necessary facilities, baseball diamond, etc. $75,000.

Ont., Arnprior—STREET LIGHTING SYSTEM—Arnprior Hydro Comn., Arnprior, street light sys. $50,000. G. F. Drewery, Ontario H. E. Com. University Ave., Toronto, engr.

Ont., Aylmer—PARK, etc.—Municipality, park, recreation grounds and tourist camp. $65,000.

Ont., Cobourg—HOCKEY RINK, etc.—Municipality, hockey and skating rink. $25,000.

Ont., Hamilton—PARKS—City Park Bd., S. Manson, chn., imprv. city parks, bandstand and stage in Mountain Drive Park; swimming pool, playing field, clubhouse and grandstand on Inch Property; playground, wading pool, tennis courts, clubhouse, playing field and picnic ground at Bruce Park; bowling green and clubhouse at Mountain View Hotel. $120,000.

Ont., Niagara Falls—TUNNEL—Niagara Parks Comn., Niagara Falls, plans prepared tunnel at Table Rock House, 460 ft. under Horseshoe Falls. $40,000. H. G. Acres & Co., 2135 Culp St., engrs.

Sask., Prince Albert—POWER DEVELOPMENT—Province of Saskatchewan, Regina, further development and completion Fort a la Corne power site. $250,000. Dpt. P. Wks., Regina, engr.

BIDS ASKED

Bids Asked October 31

B. C., Bowen Island—WHARF REPAIRS, etc.—Secy. Dpt. P. Wks., Ottawa, Ont., repairing wharf and wharf approaches Snug Cove, and repairing wharf, wharf approaches and float and constructing new gangway at Cowan's Cove. About $35,000. Plans deposit $10.

Bids Asked November 9

†W. Va., Wheeling—AIRPORT GRADING, etc.—Bd. Comrs. Ohio Co., City County Bldg., grading, drainage, paving, etc., at Shore Creek. $400,000. CAA. CD 7/7—ENR 7/13.

Bids Asked November 14

†Arizona-Nevada—TRANSMISSION LINE—Bureau Reclamation, Parker Dam, Calif., approx. 140 mi. 161-kilovolt, three-phase, single-circuit, wood-pole, H-frame-type transmission line, extending from switching station at Parker Dam to Phoenix substation, near Phoenix, Ariz., Spec. 1080. Extended date. CD 9/27—ENR 10/5.

Bids Asked November 21

La., Winnfield—ELECTRIC LIGHT GENERATING AND DISTRIBUTION SYSTEM, etc.—Mayor, City Hall, complete electric-light generating and distr. sys., and NW sys. imprvs., for Town. $260,000. J. M. Fourmy, Hammond, engr.

Bids Asked

†N. J., Newark—HANGAR—U. S. Eng., 120 Wall St., New York 5, N. Y., Hangar Bldg. 112 addn., Army Air Field. $36,800. CD 7/25—ENR 7/27.

Texas—TRAIN CONTROL SIGNAL SYSTEM—The Chicago, Rock Island & Pacific Ry. Co., F. W. Thompson, ch. engr., La Salle St. Station, Chicago 5, Ill., train control signal sys., electrically operated, between Fort Worth and Dallas, $164,985. CD 10/12—ENR 10/19, under Fort Worth.

Tex., Orange—FLOATING DRY DOCK—Levingston Shipbuilding Co., Orange, floating dry dock. $350,000. CD 10/12—ENR 10/19.

LOW BIDDERS

†Calif., Mather Field (br. Sacramento)—FUELING SYSTEM—U. S. Eng., 1209 Wright Bldg., Sacramento, Zone 8, A. C. fueling sys., at Mather Field, Spec. 901, from Markwart Co., P. O. Box 2104, Sacramento, **$37,589.**

†Calif., Stockton—SPRINKLER SYSTEM—U. S. Eng., 1209 8 St., Sacramento, installing automatic sprinkler sys. in warehouses, Stockton Ordnance Depot, Spec. 974, from MacDonald & Kahn, Inc., 200 Financial Center Bldg., San Francisco, **$59,400.**

†Calif., Wilmington—UNLOADING AREA—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, Oct. 14, unloading area at Port of Embarkation No. 41, from Mead & O'Donnell, 7769 Melrose Ave., Los Angeles, **$56,991.**

†Pa., Phila.—FIRE BOAT SLIP—U. S. Eng., Penn Mutual Bldg., 6 and Walnut Sts., Oct. 12, fireboat slip and wharf, Hog Island, from Brann & Stuart, Broad St. Station Bldg., **$42,495.** CD 10/9—ENR 10/12.

CONTRACTS AWARDED

†Ala., Gadsden—SPRINKLER SYSTEM—U. S. Eng., Grant St. west of westwood St., Mobile, automatic sprinkler sys. at Specialized Depot, Inv. OI-0776-45-12, to Perkins Automatic Sprinkler Co., 417 E. Markham St., Little Rock, Ark., **$134,347.** Bids 9/23. CD 8/24—ENR 8/31.

†Ariz., Litchfield Park—HANGAR—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., steel hangar, N.A.F., NOY 11173, to Bethlehem Steel Co., Bethlehem, Pa.

†California—PONTOON FERRY FLOATS—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., 2 pontoon ferry floats in San Francisco Bay area, NOY 11026, to Walter W. Johnson Co., Balfour Bldg., San Francisco, **$250,000.** CD 10/18.

†California—TRACK RELOCATION—U. S. Eng., 1209 8 St., Sacramento, Zone 8, relocating section Sacramento Northern R. R. at West Levee of Yolo By-Pass, Yolo Co., to J. R. Reeves, 12 and American River, Sacramento, **$41,778.**

†Calif., Yerba Buena Island—PIER REPAIRS—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., pier repairs, NOY 10289; to Healy Tibbetts Constr. Co., 1100 Evans Ave., San Francisco, **$54,132.**

Conn., East Hartford—EXPERIMENTAL HANGAR—Pratt & Whitney Div. United Aircraft Corp., 400 Main St., masonry experimental hangar, to Wadhams, May & Carey Co., 15 Lewis St., Hartford. Est. **$75,000.** Albert Kahn Associated Architects & Engineers, Inc., 345 New Center Bldg., Detroit, Mich., engrs. CD 9/8—ENR 9/14.

†Fla., Pensacola—AIR STATION BLDG.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., 2 gunnery training bldgs., Naval Air Station, NOY 10276, to Dyson & Co., Pensacola, **$88,1**
CD 8/2.

†Fla., St. Petersburg—FERRY SERVICES UNIT FACILITIES—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., ferry services unit facilities, F.S.V. 7, NOY 10676, to Daniel Abbott Co., Hopewell, Va., **$108,050.**

†Fla., Vero Beach—RADAR INSTALLATION—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., radar installation, construction, Naval Air Station, NOY 10699, to Ivy H. Smith Co., P. O. Box 5098, Jacksonville, **$32,600.**

†Idaho, Mountain Home — AIRFIELD BLDGS.—U. S. Eng., 628 Pittock Block, SW 10 Ave. and Washington St., Portland, Ore., 2 navigation trainer bldgs., Army Air Base, Inv. 993, to E. D. McLean, 1707 N. Knight St., Boise, **$25,236.** Bids 10/14.

†Kan., Topeka—FIRE WALLS—U. S. Eng., 10 E. 17 St., Kansas City, Mo., 3 fire walls in warehouses, to Bowers Const. Co., 627 College St., **$39,000.**

†Maryland—SPRINKLER SYSTEM—U. S. Eng., Standard Oil Bldg., Baltimore, automatic sprinkler sys., Holabird Signal Depot, Contr. W-18-020-eng-670, to Grinnell Co., Inc., Garrett Bldg., Baltimore, **$47,338.**

★**†Md., Patuxent River (br. Wash., D. C.)**—RUNWAY, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., runway and taxi strips, Naval Air Station, NOY 10621, to C. J. Langenfelder & Son, 8427 New Philadelphia Rd., Rosedale, Baltimore, **$1,031,647.** Bids 10/
CD 10/6—ENR 10/12, under LB.

Montana — RAILROAD WORK — Great Northern Ry. Co., C. M. Nye, ch. engr., 175 E. 4 St., St. Paul, Minn., revising road grade and reducing curvatures on 5 mi. trackage between Acme and Collins, to Morrison-Knudsen Co., 319 Bway., Boise, Idaho. Est. **$115,000.**

†Neb., Harvard—PARKING AREAS—U. S. Eng., 1709 Jackson St., Omaha, parking areas at airbase, to Otto B. Ashbach & Sons, 2700 Hamline Ave. N., St. Paul, Minn., **$55,000.**

New Jersey—TELEPHONE CABLE—Bell Telephone Co., Broad St., Newark, constructing, installing 288 ft. submarine telephone cable, on natural bottom of Branchport Creek (arm of Shrewsbury River) about N ft. from Branchport Ave. Bridge, between Long Branch and Oceanport, own forces **$35,000.**

†N. M., Alamogordo—AIR BASE BLDGS.—U. S. Eng., Commercial Bldg., Albuquerque, addnl. airbase bldgs., facilities, to W. R. Skousen, Albuquerque, **$135,158.**

Oklahoma and Kansas—NATURAL GAS PIPELINE—Cities Service Gas Co. SE of City, Oklahoma City, Okla., 50 mi. 16 in. natural gas pipeline main between Shidler, Okla., and Caney Kan., to Sharman & Allen Oil & Gas Bldg., Houston, Tex., **$286,000.** Bids 9/25. CD 9/21—ENR 9/21.

Oregon—POWER TRANSMISSION LINES—Sunrise Valley Electrification Corp., Alturas, Calif., 54.5 mi. rural power transmission lines, Lake Co., to L. H. Leonardi, 1010 D St., San Rafael, Calif., **$43,415.** Floyd Engineering Co., Cheyenne, Wyo., engrs.

†Tex., Amarillo—PIPELINE CARRIER—Phillips Petroleum Co., Bartlesville, Okla., 32 mi. 12 and 20 in. gas pipeline carrier serving carbon-black plants in Borger and Pampa areas, to Eastern Constr. Co., Borger and Pampa, **$136,000.** Defense Plant Corp. will finance.

†Tex., Dalhart—AIRFIELD BLDG.—U. S. Eng., 416 Wright Bldg., Tulsa, 2, Okla., bombing trainer bldg., Army Air Field, Contr. W-34-066-eng-283, to Ditmars-Dickmann Constr. Co., Muskogee, Okla., **$25,622.**

Tex., Houston—PIPELINE—United Gas Pipe Line Co., United Gas Bldg., 28 mi. 18 in. natural gas pipeline, to Sharman & Allen Oil & Gas Bldg., **$110,000.**

†Utah, Clearfield—TRACKAGE—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., 25, D. C., increase trackage, Naval Supply Depot, NOY 1161 to Gibbons & Reed Co., 259 W. 2 South St., Salt Lake City, **$84,750.**

N. S., Amherst—SPORTS FIELD, etc.—Knights of Pythias, Amherst, sports and athletic field, playground, etc., Agnes Sc day labor. **$34,000.**

Ont., Port Stanley—PIPELINE, etc.—Mc Manus Petroleums Ltd., 225 Rectory St., London, pipeline and erecting oil storage tanks, to B. J. Miller & Co., 550 Bathurst St., Toronto. Est. **$70,000.**

Que., Huntingdon — STEAM DISTRIBUTION SYSTEM—Dpt. Munitions & Supply, Ottawa, Ont., supplying, installing steam distr. sys. at Casualty Retaining Centre, Reid & Cambridge, Ltd., 1223 Greene Ave., Westmount, about **$80,000.**

Proposal Advertisements see p. 23